PB-242 583

INFORMATION OF FAA CERTIFICATION OF AIRCRAFT

Carl Modig

Informatics, Incorporated

Prepared for:

Environmental Protection Agency

January 1975

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National Technical Information Service
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178115

PB242583
EPA-550/9-75-022

INFORMATION ON FAA CERTIFICATION OF AIRCRAFT

JANUARY 1975

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Document is available to the public through the National Technical Information Service, Springfield, Virginia 22151

BIBLIOGRAPHIC DATA SHEET	1. Report No. EPA 550/9-75-022	2.	PB 242 583

4. Title and Subtitle

Information of FAA Certification of Aircraft

5. Report Date: 31 Jan. 1975

6.

7. Author(s): Carl Modig

8. Performing Organization Rept. No.

9. Performing Organization Name and Address

Informatics Inc.
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10. Project/Task/Work Unit No.

11. Contract/Grant No. 68-01-3115

12. Sponsoring Organization Name and Address

Environmental Protection Agency
Office of Noise Abatement & Control
Crystal Mall #2, 1921 Jefferson Davis Highway
Arlington, Virginia 20460

13. Type of Report & Period Covered

14.

15. Supplementary Notes

16. Abstracts

This study provides an overview of FAA aircraft type certification regulations and the regulatory process through which aviation noise regulations are or could be implemented. Special reference is made to the regulatory process most relevent to transport category and/or turbine powered aircraft. Various types of certificates (new type certificates, amendments to type certificates, supplemental type certificates, airworthiness certificates, etc.) are covered. Tabular data for various types and models certificated since 1969 are presented as well as types or models complying with the noise limits in Appendix C of FAR 36.
Appendices include: Sample sheets from FAA "Type Certification Project Status" Log; Extent of Changes in Aircraft Modified by Amendment to Type Certificate; Annual Production (or Sales) of Selected Transport or Turbojet Aircraft.

17. Key Words and Document Analysis. 17a. Descriptors (NOT VERIFIED IN T.E.S.T.):

Certification, civil aircraft, aircraft, federal regulations.

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by

Carl Modig

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Noise Abatement and Control
Washington, D.C. 20460

Under contract No. 68-01-3115

This report has been approved for general availability. The contents of this report reflect the views of the contractor, who is responsible for the facts and the accuracy of the data presented herein, and do not necessarily reflect the official views or policy of EPA. This report does not constitute a standard, specification, or regulation.

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PREFACE

Under Section 7 of the Noise Control Act of 1972 (Public Law 92-574), the Environmental Protection Agency (EPA) is authorized to propose to the Federal Aviation Administration, aircraft noise regulations, including the application of such regulations in the issuance, amendment, modification, suspension or revocation of any certificate authorized by the Federal Aviation Act of 1958 (49 U.S.C. 1431).

This study was undertaken to furnish EPA with an overview of aircraft type certification regulations (e.g., original type, supplemental, airworthiness, etc.) through which aviation noise regulations are or could be implemented.

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1. INTRODUCTION

As requested by EPA/ONAC a literature search and study has been made on the following; with special reference to transport category aircraft..

(1) Certification process. Information on what requirements and procedures must be met (from application to award) to obtain "original type certificates," "amended type certificates," "supplemental type certificates," etc. How are these certificates conveyed and for what periods of time are they effective?

(2) Specific types and models certificated since 1969. Since December 1, 1969 to date, what transport category aircraft models (including business jets) have been certificated in accordance with FAR Part 36, compared to a listing of all transport category aircraft models.

The listed aircraft are to be grouped according to the various types of certificates granted. For aircraft other than those for which an "original type certificate" was granted, major airframe and/or engine changes which were made from the original model are to be indicated.

(3) Recent annual production statistics or estimates.

The certification process is complex. One expert consulted called it "a bag of worms." Parts of it are more clearly documented and clearly explained than others, and other parts are ambiguous unless the actual practice is examined case by case. One reason for this is that the FAA documentation of the process is itself complex (FAR Part 21; Part 25, since we are talking chiefly about transport aircraft; plus handbook on Type Certification No. 8110.4, issued to FAA personnel). A second reason is that the process is decentralized to the FAA regions, with only summary reporting to FAA headquarters in Washington. Details of the process may vary from region to region. Furthermore, in the region controlling a particular certification process, large portions of the work may be delegated to an FAA Designated Engineering Representative (DER), who is frequently an

employee of the applicant manufacturer. The amount delegated cannot easily be described, for it depends on the judgment of regional FAA officials, the complexity and scope of the case, and the reputation and integrity of the manufacturer.

On the other hand, parts of the process are documented in such detail that it is not possible to summarize all of the fine points in this overview. For this reason, the reader is urged to consult FAR 21 and the Type Certification Handbook 8110.4 if he has detailed questions about a particular aspect of the process

2. CERTIFICATION PROCESS

2.1 Requirements and Procedures for Certificates

2.1.1 The Various Kinds of Certificates

FAA issues two main types of certificates on aircraft: those on types and those on individual aircraft. Certification actions on types include:

New Type Certificates (TC's)
Amendments to Type Certificates
Supplemental Type Certificates (STC's)
Amendments to Supplemental Type Certificates

Restricted TC's
Provisional Certificates:
- Class I Provisional Type Certificates
- Class II Provisional Type Certificates
- Provisional Amendments to Type Certificates

In addition to type certificates, the FAA, when requested, certifies each U.S. registered aircraft to be airworthy.* There are standard and special airworthiness certificates (AC's)

Standard:	(for aircraft type certificated in the normal, utility, acrobatic, or transport categories)
Special:	restricted airworthiness certificates; limited airworthiness certificates; provisional airworthiness certificates; special flight permits; experimental.

* All aircraft should be registered. All registered aircraft are not airworthy.

There are other types of FAA certificates that are related to type certificates and airworthiness certificates but do not certify aircraft. There is the Production Certificate (PC), awarded to certain manufacturing facilities for particular aircraft types. The manufacture of an aircraft at a Production Certificated location facilitates the award of airworthiness certificates. There is the Delegation Option Authorization, allowing the holder of TC's and a PC for helicopters and small aircraft to award themselves other TC's, PC's and AC's. This power does not evidently extend to cover any transport and/or business jet aircraft, since the only turbojet engines eligible are of not more than 1000 lbs. thrust. Finally, there is the Designated Alteration Station (DAS), by which the FAA delegates the power to issue STC's, and certain airworthiness certificates, to the aviation industry

2.1.2 New Type Certificates

Type Certificates are issued for aircraft engines and propellers as well as for aircraft. Since recently added revisions to the Federal Aviation Regulations have various dates of effectiveness, the date of application for a type certificate determines which requirements of the FAR must be met. An application for the transport category is effective for five years; for the other ordinary categories (normal, utility, acrobatic) it is three years unless an exception is granted. Besides new aircraft designs, existing designs also undergo the new type certificate process if proposed design changes are "so extensive that a substantially complete investigation of compliance with the applicable regulations is required" (21.19)*. For transport category aircraft, Part 21 spells this out further as a change in the number of engines or in the method of propulsion (e.g. propeller to jet).

Formerly, the definition of "transport aircraft" included aircraft over 12,500 lbs. (Handbook, Appendix 1, Page 2), but it has recently been changed to cover any airplanes carrying at least 10 passengers, regardless of weight.**

Anyone may apply for a type certificate. The application is made using FAA form 312, "Application for Type Certificate, Production Certificate, or Supplemental Type Certificate." It is made to the region in which the applicant is located and is accompanied by a three view drawing of the aircraft plus available preliminary

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* All references are to the FAR 21 as of November 1, 1974 ("21.--" or to the last version available ("Handbook /-"), of FAA Handbook 8110.4, Type Certification.

** See FAR Section 23.1 and 135.144.

basic data. The region then becomes the controlling region; the Engineering and Manufacturing Branch/Aircraft Certification Staff/ Aircraft Engineering Division of that region processes the application and issues the certificate, in accordance with policy set by the Engineering and Manufacturing Division of the Washington office. There is one exception to regional independence: special conditions. If it is found per FAR 21.101(b) that the airworthiness regulations of FAR 21 do not contain adequate or appropriate safety standards because of a novel or unusual design feature, special conditions must be issued with the TC. Proposed special conditions are developed by the region, giving the applicant and other interested parties opportunity to participate, but they are issued by the Engineering and Manufacturing Division, Washington, with the assistance of the Office of the General Counsel. The detailed procedures are to be found in the Handbook, pp. 3 to 4-3.

Under FAR 21.21 the applicant is entitled to a TC in the normal, utility, acrobatic or transport categories if he "submits the type design, test reports and computations" necessary to show that it meets:

- the airworthiness requirements of the FAR
- the aircraft noise requirements of the FAR
- and any special conditions prescribed.

In addition, the type certificate data sheet must be prepared and, for transport category aircraft, the airplane flight manual must be FAA-approved. Specific requirements for transport category aircraft are to be found in FAR 25.

Steps -- The region sets up a Type Certification Board (TCB) with prescribed FAA membership (Handbook, p. 6-7,) and chaired by the Region Chief, Engineering and Manufacturing Branch. During its lifetime, the TCB holds at least three meetings: preliminary, preflight and final. At the preliminary meeting a first draft of the FAA Type Inspection Authorization (TIA, Form 8110-1) should be prepared as far as possible; special compliance teams should be formed for probable problem areas (e.g.,cockpit visibility). Also, the TCB must determine whether the special conditions process, involving Washington, must be initiated. Then manufacturing inspection by FAA inspectors continues to determine that the prototype aircraft conforms with drawings and specifications, and to evaluate special manufacturing processes. The degree to which FAA inspectors spot check or inspect intensively is partly determined by the manufacturer's experience (Handbook, p. 39), but at any rate, much of the inspecting must be done by the applicant's own staff. Conformity check results are reported on Conformity Inspection Report forms (CIR's, Form 8100-1). Processes and fabrication methods must be specified by process drawings and specifications, which also become part of the Type Design.

If there are any particularly "complex, controversial, or troublesome" design features, the Chairman of the TCB may appoint a Critical Design Review (CDR) team, to work concurrently with the standard regional type certification program. Technical assistance from Washington usually is included on the CDR team.

When the documentation forming the Type Design is complete, and the prototype aircraft is ready, the final TIA is issued authorizing ground and flight inspections. The TCB holds its pre-flight meeting.

The ground inspection physically determines that "the aircraft submitted for FAA flight test meets the minimum requirements for quality, conforms with the technical data," and is safe to fly. The ground inspection proceed in three phases: (1) preliminary, including inspections that had been made during the course of development and construction; (2) official, which the FAA performs just prior to the FAA flight test; (3) coordinated ground-flight inspection, to determine that the aircraft is airworthy and all deficiencies so far uncovered are corrected before FAA flight testing. The second phase is performed only after the manufacturer has submitted a Statement of Conformity (FAA Form 317), which is his committment that the prototype aircraft is ready for FAA final inspection and flight test. At the conclusion of the ground inspection the ground portion of the Type Inspection Report (TIR, Form 8110-5 for airplanes) must be prepared in time for review by the final TCB meeting.

The flight tests follow. (An experimental certificate of airworthiness must be obtained before any flight testing).

The final TCB is then held to review outstanding questions and establish the TC data sheet items. The TC is issued upon resolution of all outstanding items.

Within 90 days of TC issuance, the flight inspection portion of the Type Inspection Report (TIR) should be completed, completing the TIR. The TIR now contains results of all official TC inspections, and is retained by the certificating region for reference purposes. It is an in-house FAA document; the applicant may get a copy only after all internal FAA and proprietary information is removed.

Form -- the TC includes the Type Design (21.31), the operating limitations, the TC data sheet, and the "certification basis": the applicable regulations and special conditions (often issued by FAA letter) with which the Administrator records compliance. The TC data sheet is distributed to all regions and the Washington office, and is available to the public. The complete TC, since it includes the Type Design, is not available to the public but may be seen by the National Transportation Safety Board. Special conditions are filed as dated material in the FAA General Counsel's office.

TC's are transferable to other persons and can also be made available by licensing agreements.

TC's are issued for foreign-manufactured aircraft from countries with which the U. S. has an agreement for acceptance, provided, inter alia, that the civil air authority of the other country signs a Certificate of Airworthiness for Export and technical data are submitted, including data on aircraft noise airworthiness showing noise levels no greater than that under FAR 36. (21.29)

The holder of a TC becomes eligible to receive a Production Certificate. Almost all holders of TC's for transport category aircraft get them, judging by all recent TC's for jet transport aircraft. (The number of the PC is listed on the TC data sheet.) The reason is simple: aircraft manufactured under a PC become eligible for a standard Airworthiness Certificate (AC) without further showing.

2.1.3 Amendments to TC's

Amendments to TC's and Supplemental TC's (STC's) are very similar in form, requirements and purpose, and compared to TC's form the vast bulk of FAA type certificating activity. They differ from each other in the following way: anyone may apply for a STC, but only the holder of a TC may apply for an amendment to the TC. (21.113) Application is made to the FAA region where the Type Design is filed.

Requirements -- Alterations introducing a major change in a product require an amendment of the TC, or an STC. The language of 21.93 implies that a major change is one having an "appreciable effect on the weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product."

The following charts (Tables IA & IB) list certificated jet transports together with data about the TC and amendment-to-TC processes. It will help to clarify how the processes have worked in practice for this type of aircraft. The information is excerpted from the TC data sheets.

In general, the applicant need satisfy only the requirements of the regulations incorporated in the original TC.*

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* However, under 21.101(a), an exception is made for the provisions of FAR 36, including amendment 2, which must be met irrespective of the date of the original TC.

TABLES IA & IB (following pages)

INFORMATION ON CERTIFICATION OF AIRCRAFT

IA: at least some models of the aircraft were approved on or after December 1, 1969

IB: All models of the aircraft approved before December 1, 1969

Notes to Tables

1) Source of all data columns 1–14: FAA Aircraft Type Certification Data Sheets and Specifications updated to include all revisions issued through October 1974.

2) Source of all data columns 15 – 17: FAA Summary of Supplemental Type Certificates. Includes all issued through September 1974.

3) For the group of IB, there may have been revision in the data sheets after December 1, 1969, but no approvals of new models or series of models.

4) With one exception, no STC has been issued for transport category jet aircraft for changes to engines or major changes to airframes. Such changes otherwise have always been covered by an amendment to the TC, as shown in the tables. However, in the last few years, some applications have been made to re-engine business jets using an STC, although no STC has yet been issued by the FAA. See footnote, page 20.

5) In cases where no "date of application" is given, it is because it was not given on the TC data sheet.

TABLE IA

IA 1							Approved Before 1 December 1969			Approved On Or After 1 December 1969				Information on STC's		
(1) TC Holder	(2) Basic Model	(3) TC	(4) FAA Region	(5) Date of Application	(6) Date Approved	(7) Latest Revision (and date of)	(8) Models	(9) Date Approved	(10) Engine Type(s)	(11) Models	(12) Date Approved	(13) Engine Type(s)	(14) Nature of Change/Notes	(15) No. Issued	(16) Approx. No. of Holders	(17) Type of STC
U.S. Airlines Fleet - 4 engine																
Boeing	747, -100, -200B, -200F, 747SR	A20WE	Northwestern		12/30/69	Rev. 6 (5/1/74)				I. 747-100	12/30/69	4 PGW JT9D-3, -3A, -7, or 7A		54	20	Installation of avionics, center plenum system, cargo containers, baggage compartments, cargo seating equipment, etc.
										II. 747-200B	12/23/70	same	Extended range version. Strengthened components, increased gross weight.			
										III. 747-200F	3/7/72	JT9D-3A, -7, or -7A	Freighter version of 747-200B. Cargo door, mods to interior, strengthened components etc.			
										IV. 747-200C	4/17/73	same	Convertible version of 747-200B series			
U.S. Airlines Fleet - 3 engine																
Lockheed	L-1011-385-1	A23WE	Western		4/14/72	Rev. 9 (9/15/74)				I. L-1011 385-1	4/14/72	3 Rolls Royce, RB211-22 C-02, RB 211-22C4, RB211-22B	Note: Special conditions on airframe, H2S-17-WE-6 amendment no. 1 of 12/3/71	9	8	Interior passenger compartment modifications.
McDonnell Douglas	DC-10-10, -30, -30F, -40	A22WE	Western		7/29/71	Rev. 1 (6/5/73)				I. DC-10-10	7/29/71	3 GE CF6-6D or CF 6-6D1	For all models, special conditions No. 25-16-WE-7 of 7/9/71, and 25-46-WE-4 of 10/26/72	29	12	Installation of mods to passenger compartment
										II. DC-10-40	10/20/72	3 PGW JT 9D-20	Engines with water injection.			
										III. DC-10-30	11/21/72	3 GE CF6-50A				
										IV. DC-10-30 F	3/30/73	3 GE CF6-50A	Freighter version of III.			

TABLE IA

							Approved Before 1 December 1969			Approved On Or After December 1969				Informaries on STC's		
(1) TC Holder	(2) Basic Model	(3) TC	(4) FAA Region Controlling	(5) Date of Application	(6) Date Approved	(7) Latest Revision (and date of)	(8)	(9) Date Approved	(10) Engine Type(s)	(11) Models	(12) Date Approved	(13) Engine Type(s)	(14) Nature of Changes/Notes	(15) No. Issued	(16) Approx. No. of Holders	(17) Typical Changes
U.S. Airline Fleet - 2 engine																
Boeing	737-100 series -200 series -200C series	A16WE	North-western	10/9/64	12/15/67 (757-112)	Rev. 6 (5/1/73)	I. 737-100 series	various: 12/15/67 7/14/69 11/12/69	2 JT8D-7, -9, or-15	IIb. 737-200 series All other models & serial numbers except those listed under IIa.	various	same	Note: Various specific models in a series were approved on different dates. Thus, there are 3 dates of approval for the I model series, 47 dates for II, and 16 dates for III type aircraft.	83	20	Installation of mods to passenger cabin, avionics lights, cargo handling pallets, etc.
							IIa. 737-200 series models 201 serial nos. except 20632 & 20633, 205 except serial 8/3/71, 214, 217, 219, except serial 20344, 222 except serials 20529-331, 247, 248, 275 except serials 20588 & 20670, 251 except serials 20413, 20414, 20449-452, 20506-509, 291, 297, 271 except serial 20589, 2A3, 2A6, 2E1 except serial 20300, 2CO, 282, except 20680, except serial 20758, 244		same	IIc. 737-200C series. All models except -202C/210C serial nos. 19426, 19594, 20138;-248C;-275C, which were approved before 12/1/69.	various	same				
British Aircraft Corp.	BAC 1-11 200 series 1-11 400 series	ASEU	European	10/4/61	4/15/65	Rev. 14 (2/4/74)	I"a". 1-11 200 series except amended as follows: Model 204/AF 212/AR 215/AM	4/15/65 5/13/65 3/29/66 4/13/66	2 Rolls Royce Spey 506-14, -14A, 14C, or 14D	I"b". 1-11 200 series model 201/7/AC	3/26/70	same as Ia.	Note: Special conditions as recorded in (British) Air Registration Board Validation Arrangements Note 1 Issue 1. Exemptions to FAR 25: 855A fuel jettisoning 549 max. passengers.	29	16	Installation of avionics, mods to passenger cabin, aux. fuel tanks in cargo compartments, etc.
							II"a". 1-11 400 series except amended as follows: Model 410/AQ 419/EP	9/1/66 8/25/73	2 Rolls Royce Spey 511-14, or -14W	II"b". 1-11 400 series model 412A/EB	5/14/73	511-14W				

TABLE IA

(1) TC Number	(2) Basic Model	(3) TC	(4) FAA Region Controlling	(5) Date of Application	(6) Date Approved	(7) Latest Revision (and date of)	(8) Models	(9) Date Approved	(10) Engine Type(s)	(11) Models	(12) Date Approved	(13) Engine Type(s)	(14) Nature of Changes: Notes	(15) No. Issued	(16) No. of Holders	(17) Typical Changes
										IV	Cancelled					
Other - Swit/Ger										V 1123	12/8/71	2 GE CJ610-9	Increased weight, high-lift wing, greater engine thrust & fuel capacity, fuselage length. Note: Special conditions: FAA letters of 12/13/63, 6/2/64 Exemptions: 344 & 660. Complies with FAR 36 (1)(c)(2)	40	24	Avionics, mods to cabin interior, lights, aux. power unit, thrust reversers. SA 1879SW of 6/1/76, Partial system mod, installation of fleet air heated engine duct etc.
Israel Aircraft Industries	"Astra Commander" 1121, 1121A, 1121B, 1123	A25W	Southwestern. Technical data now filed with Europ. area region.	[illegible]	11/4/64 (reissued IAI 7/19/68)	Rev. 11 (7/27/73)	I. 1121 II. 1121A III. 1121B	11/4/64 9/19/67 4/23/68	2 GE CJ610-1, or 610-5 CJ610-1, CJ610-5							
Cessna Aircraft Co., Wichita	"Citation" 500	A22CE	Central	9/16/68	9/9/71 (PTC issued per FAR 121.91 6/29/71)	Rev. 4 7/15/74				I. 500	9/9/71	2 PSW JT15D-1, or United Aircraft of Canada JT15D-1	Note: Special conditions: 25-25-CE-4.	13	7	Avionics, mods to cabin interior, lights
Hawker Siddeley Aviation Ltd., England	DH, 125-1A, -1A/522, -1A/R-522, -3A/RA, -400A, Beech-craft DH 125-400A, -600A	A3EU	European	9/28/60	9/29/64	Rev. 11 (11/26/73)	I. DH, 125-1A II. DH, 125-1A/522 III. DH, 125-3A IV. DH, 125-1A/R-522 VI. DH, 125-1A/S-522 VII. DH, 125-3A/RA VIII. DH, 125-400A	9/25/64 2/3/66 11/7/66 8/9/67 8/9/67 2/15/68 2/15/68 11/15/68	2 Bristol Siddeley Viper 522 same as II " " " " " " " "	IX. Beechcraft Hawker DH, 125-400A X. DH, 125-600A	7/14/70 9/17/72	Viper 522 2 Rolls Royce (1971) Bristol Engine Div. Viper 601-22	Same as VIII exception for name plates and data plates. Increased fuselage length, weights, speeds. Complies with FAR 36(1)(c)(2)	79	21	Avionics, mods to cabin interior, lights, etc.
Dassault (Falcon) (Mystere) (Fanjet)	Falcon Series C, D, E, F	A7EU	European	9/11/62	6/9/65	Rev. 7 (6/13/72)	I. Fan Jet Falcon III. Series D	6/9/65 6/20/68	2 GE CF-700-2C CF-700-2D	II. Series C IV. Series E V. Series F	2/24/70 2/24/70 2/24/70	CF-700-2C CF-700-2D-2 CF-700-2D-2	3-disc brakes & increased fuel capacity 3-disc brakes & increased fuel capacity Installation of high lift devices on wing leading edges.	93	31	Avionics, mods to interior

TABLE IA

(1) TC Holder	(2) Basic Model	(3) TC	(4) FAA Region Controlling	(5) Date of Application	(6) Date Approved	(7) Latest Revision (and date of)	Approved Before 1 December 1969			Approved On Or After 1 December 1969				Information on STC's		
							(8) Models	(9) Date Approved	(10) Engine Type(s)	(11) Models	(12) Date Approved	(13) Engine Type(s)	(14) Nature of Changes/Notes	(15) No. Issued	(16) Approx. No. of Holders	(17) Typical Changes
Start - 2 engine - continued																
Cutes Leasjet Corp. (Wichita)	Learjet 24, 24A, 24B, 24B-A, 24C, 24D, 24D-A, 25, 25A, 25B, 25C, 35, 36	A10CE	Central	5/13/65	3/17/66	Rev. 12 (8/1/74)	I. 24	3/17/66	2 GE CJ-610-4, or -6	II"b" 25A 25B 25C	8/19/70 8/19/70 8/19/70	2 GE CJ-610-6	Note: Special Conditions: 24 & 24A: FAA letters of 8/5/65 & 11/19/65 24B & other 24's: FAA letters of 3/1/67 25's FAA letters of 3/1/67, 35 & 36: FAA letters of 3/1/67, plus #25-30-CE-6 of 4/18/73 and amendment 1 of 9/18/73	26	16	Avionics, mods to cabin interior, installation of camera door. Note: SA26"SW Amended 11-13-73 Lists of owned approvers.
							24A	4/5/66								
							II"a" 25	10/10/67	CJ-610-6	III"b" 24C 24D 24D-A	6/30/70 6/30/70 7/31/70	CJ-610-6				
							III"b" 24B 24B-A	12/17/68 4/24/69	CJ-610-6							
										IV 35 36	6/28/74 6/28/74	2 AiResearch TFE 731-2-2B	Renengined; increased engine power, weight.			
Rockwell International Corp. (Columbus Div.)	"Sabreliner" Rockwell International NA-265, 265-20, -30, -40, -60, -70, -80	A2WE	Western		3/23/62	Rev. 10 4/1/74)	I NA-265	3/23/62	2 PGW JT12A-6A	IV NA-265-70	6/17/70	2 PGW JT12A-8	Increased weights			
							NA-265-20 -30	8/31/62 12/20/62								
							II -40	4/17/63	JT12A-6A, or 8	V -80	11/30/73	2 GE CF-700-2D -2"B"	Re-engined; increased weights Notes: Special Conditions #25-11-WE, and FAR 36, 1(C) and 36, 2 apply to NA-265 -70 and -80 Exemptions: FAA #26, 270, 586, 709, 709A			
							III -60	4/28/67	JT12A-8							
Dassault	Falcon 10	A33EU	European	6/8/69	9/20/73	---										

TABLE IB

(1) All models of the basic aircraft certificated before 1 Dec. 1969. Original Type Certificates

(2) TC Holder	(3) Basic Model	(4) TC	(5) FAA Region Controlling	(6) Date of Application	(7) Date Approved	(8) Latest Revision (and Date of)	(9) Models	(10) Date approved	(11) Engine type(s)
U.S. Airline Fleet - Jetplane									
Boeing	707-300, -200, -100B Long Body -100B Short Body	4A21	Northwest	18 Sep 59	Rev. 8 (1 May 73)	I. 707-100 long body		18 Sep 59	4 P&W JT3C-6
						II. 707-200		5 Nov 59	JT4A-3/3A or JT4A-9/11C
						III. 707-100B long body		1 Mar 61	JT3D-1, -1MCb, -3, 3F, or 1MC7
						IV. 707-100B short body		24 Jul 61	JT3D-1, -1MC6, 1MC7
Boeing	707-300, -400, -300B, -300C	4A26	Northwest	15 Jul 59	Rev. 9 (1 May 73)	I. 707-300		15 Jul 59	JT4A-9, -1, -11, -12
						II. 707-400		12 Feb 60	4 Rolls Royce Turbojet Conway Mark 508 (R, Co-12)
						III. 707-300B		21 May 62	JT3D-3, -3B, -1, -1MC, -1MC6, -1MC
						IV. 707-300C		30 Apr 63	all of III above plus JT3D-7
Boeing	720	4A28	Northwest	30 Jun 60	Rev. 8 (1 May 73)	I. 720		30 Jun 60	4 P&W JT3C-7
	720B					II. 720 B		3 Mar 61	JT3D-1, -1-MC6, -1-MC-7
Convair	22,	4A27	Western	1 May 60	Rev. 3 (15 Apr 73)	I. 22		1 May 60	4 GE CJ805-3, or -3A
	22M					II. 22M		24 Jul 61	4 GE CJ805-3B
McDonnell Douglas	DC-8-11 through DC-8-63F	4A25	Western	31 Aug 59	Rev. 27 (20 Feb 72)	I through XX in the T. C.	latest model (XX DC-8-63F 7 Jun 68)		4 P&W JT4 or JT8 -type engines, except DC-8-61 (4 Rolls Royce Turbojet Conway Mark 509

TABLE IB

IB/2 All models of the basic aircraft certificated before 1 Dec. 69 Original Type Certificates

(1) TC Holder	(2) Basic Model	(3) TC	(4) FAA Region Controlling	(5) Date of Application	(6) Date Approved	(7) Latest Revision (and Date of)	Models approved before 1 Dec. 1969 (8) Models	(9) Date approved	(10) Engine type(s)
US Airline Fleet - 3-engine									
Boeing	727, -C, -100, -100C, -200	A3WE	Northwestern		24 Dec 63	Rev. 11 (1 Jul 74)	I. 727, 727-100, 727C, 727-100C	24 Dec 63 13 Jan 66	3 P&W JT8D-1, -1A, -7, -7A, -9, or -9A
							II. 727-200	29 Nov 67	All of above plus -11, -15, or -17
McDonnell Douglas	DC-9, -11, -12, -13, -14, -15, -15F, -21, -31, -32, -32F, -33F, -41	A6WE	Western	28 Feb 63	23 Nov 65	Rev. 13 (15 Sep 74)	I. DC-9-11, -12, -13, -14 DC-9-15	23 Nov 65 46 Jan ol	2 P&W JT8D-1, -1A, 5, 7, or -7A
							II. DC-9-31	19 Dec 66	same as above plus -9, -9A, -11, or
							III. DC-9-15F	1 Mar 67	Same as
							IV. DC-9-32	1 Mar 67	Same as III
							V. DC-9-32 F	4 Oct 67	Same as III
							VI. DC-9-41	21 Feb 68	JT8D-9, -21, or -15
							VII. DC-9-33 F	5 Apr 68	JT8D-9, 9A or -11
							VIII. DC-9-21	25 Nov 68	Same as VIII
Other - 4-engine							Note: TC with special conditions over FAA letter of 22 Oct. 1969, and with 2 exemptions: 415D and 424 (no fuel utilization and emergency exits)		
General Dynamics	Convair 30, 30A	4A30	Western		19 Dec 61	Rev. 4 (16 Nov 69)	I. 30 30A	15 Dec 61 10 Oct 62	4 GE CJ805-23, -23B
General Dynamics	Convair 22, 22M	4A27	Western		1 May 60	Rev. 8 (19 Apr 71)	I. 22 22 M	1 May 60 24 Jul 61	4 GE, CJ 805-3, or -3A CJ805-3B
Lockheed-Georgia	1329-23A, -23D, -23E	2A15	Southern	4 Sep 58	28 Aug 61	Rev. 8 (1 May 73)	I. 1329-23A, -23D II. 1329-23E	28 May 61 6 Jun 67	4 P&W, JT12A-6, or -6A JT12A-8

TABLE IB

IB/3 All models of the basic aircraft certificated before 1 Dec. 1969 Original Type Certificates

Models approved before 1 Dec. 1969

(1) TC Holder	(2) Basic Model	(3) TC	(4) FAA Region Controlling	(5) Date of Application	(6) Date Approved	(7) Latest Revision (and Date of)	(8) Models	(9) Date approved	(10) Engine type(s)
Civil - 2 engine									
Canadair-American Aviation	C-1159	A12EA	Eastern. Tech. data now filed with Southern Region.	24 Jun 64	19 Oct 67	Rev. 7 (1 May 7[illegible]	I. C-1159	19 Oct 67	2 Rolls Royce Spey Rb 163-25) [illegible]-6
Hamburger Flugzeugbau W. Germany	HFB 320 Hansa	A14EU	European	6 Feb 63	7 Apr 67	Rev. 4 (19 Aug 71	I. HFB 320	7 Apr 67	2 GE CJ 610-1
Fokker-VFW N.V. Netherlands	Fokker Fellowship F. 28 Mark 1000	A20EU	European	20 Oct 66	24 Mar 69	Rev. 2 (14 Apr 72	I. F28 Mark 1000	24 Mar 69	2 Rolls Royce Spey MK 555-15
Gates Learjet, Inc. (Wichita)	Lear Jet 23 (Note: Normal category, not transport category)	A5CE	Central		31 Jul 64	Rev. 7 (15 Jul 74	I. 23	31 Jul 64	2 GE CJ-[illegible]-1 or -4
Morane-Saulnier Paris	N. S. 760 (Note: utility category) 760A, 760B	7A3	European	19 Jul 68	31ul 70	(Rev. 2 (22 Dec 65	I. 760 II. 760A III. 760B	3 Jul 58 22 Dec 65 22 Dec 65	2 Turbomeca Marbore II C Marbore VI C Marbore VI C

If he also elects to meet any regulation in effect on the date of the application, he must then also meet any other existing regulations that the Administrator finds to be directly related (21.101).

The amendment-to-TC process follows the general steps of the TC process, except that the documentation and flight testing is usually not so exhaustive. When a number of proposed amendments together form a new variant to the basic model of the type, a new section is made in the TC, designated by a roman numeral.

Section I contains the characteristics and specifications of the original, basic model, while successive sections each cover a new model or series of models. In the case where a series of models is covered under one Roman numeral section of the TC data sheet (e.g., Boeing 737-200 series), the dates of approval of each model in the 200 series (e.g., models, -205, -214, etc.) were once all given on the TC data sheet. Now, the date of approval is listed on the TC data sheet only for the first model of the series that is approved. For examples of the extent of changes between models, see Appendix B.

2.1.4 Supplemental Type Certificates (STC's)

Supplemental type certificates may be applied for by anyone. While amendments to TC's, applications are processed by the FAA region where the applicant resides. In practice, for transport category aircraft, most are applied for by owners and operators of aircraft and firms modifying interiors of such aircraft or installing equipment such as avionics. Although STC's have been used to re-engine small piston aircraft, they have rarely been used to re-engine transport

aircraft, or make major changes to their airframes.* The FAA caseload of STC's has been estimated to be about 1300 per year. The large number of STC actions is confirmed by an estimate of 360 cases pending in the Western region during a typical quarter in 1974; the majority of these actions were STC's.

Under an arrangement spelled out in 21.431 to .493 and Handbook p. 171, manufacturers, domestic repair station operators, air carriers and others may issue STC's independently and report the action to the FAA later (within 30 days). To do this, they must qualify as a Designated Alteration Station (DAS). The DAS may also issue and amend airworthiness certificates. This arrangement enables the FAA, with limited personnel, to continue to handle the STC caseload.

In order to get a clearer idea of the type of actions covered by STC's the reader should examine the sample sheets from the Type Certification Projects Status Log.** These applications are currently active, and the pages have been chosen because of interesting transport category items. Those project numbers beginning with CT designate complete type certification of a transport; those beginning with T, partial certification (STC's and Amendments to TC's). The project numbers ending with D, DO, DM, DS, or DT are ones where the Designated Engineering Representative (Handbook, pp. 151-164) at the DAS is playing the major role in the approval process. The STC consists of the FAA approval of the STC certificate and the related TC. STC holders may obtain airworthiness certificates, and also production certificates for changes in type design approved by the STC. STC's may be amended in the same way as TC's.

* One past exception: STC SA1096 WE, amended 7/27/66, issued to General Dynamics to re-engine the Convair 340 with Rolls Royce Dart 542-4 turboprop engines.
Two pending applications for STC's:
(a) Change engines on Lear jet 24 & 25 from CJ610-6 to CJ610-8;
(b) Change engines on the Lockheed 1329 (Jetstar) from P&W JT12A series to AiResearch TFE 731-3 engines.

** Appendix A

2.1.5 Other kinds of Type Certificates

Provisional (PTC's) -- These certificates make it possible for an aircraft in the certification process to obtain a "temporary" type certificate in advance of the award of the actual TC, Amendment to TC, or STC -- provided it has finished a substantial part of its flight testing under an experimental certificate.

There are Class I and Class II Provisional Certificates. Differences between them include:

Class I	Class II
Aircraft manufacturer or engine manufacturer may apply.	Aircraft manufacturer may apply.
Applicant must apply for a TC or STC for the aircraft.	Applicant must apply for a TC in the transport category for the aircraft.
At least 50 hours flown on the experimental certificate	At least 100 hours flown.

There is also the "Provisional Amendment to a TC", quite similar to the two PTC's mentioned above. None of these three certificates of provisional character are transferable. The reader is referred to 21.71-85 for details.

Restricted -- Restricted TC's are granted for special-use aircraft for such operations as crop dusting, wildlife conservation, aerial surveying, cloud seeding, skywriting, etc. (21.25). This kind of certificate is not germane to the transport category.

2.1.6 Airworthiness Certificates (AC's)

AC's permit the operation of individual aircraft. Any registered owner of a U.S.-registered aircraft may apply to any FAA office. AC's are explained in detail in 21.171-.225. Germane to transport-category aircraft are the standard AC and the following kinds of special AC's: "provisional" and "experimental."

Standard transport category AC.-- For new aircraft, this is issued without further showing if the aircraft was manufactured under a Production Certificate, except that the FAA Administrator may inspect the aircraft for conformity to type design. The vast majority of transport category aircraft are manufactured under such production certificates; hence, the issuance of AC's is almost automatic for transport and/or subsonic turbojet powered airplanes. However, under 21.183(e), no standard airworthiness certificate is originally issued (to a new aircraft) unless the FAA has found that the Type Design meets FAR 36.

Import aircraft, including transport category aircraft, are issued the AC if the country of manufacture certifies, and the FAA finds, that the aircraft conforms to its type design and is in condition for safe operation (21.183(c). However, import aircraft equally fall under the noise requirement of 21.183(e). They

must meet FAR 36.1(d) or otherwise provide noise levels no greater than those specified in FAR 36.1(d).

Experimental Certificate (EC's) -- In general, EC's are a form of AC issued to aircraft for flight testing purposes. Aircraft with an EC may also be used for market surveys, sales demonstrations, and customer crew training if they have undergone at least 50 hours of flight testing, or at least 5 hours if the aircraft is a type-certificated aircraft that has been modified. (21.193;21.195)

Provisional Airworthiness Certificate -- These are the AC's issued to aircraft conforming to Provisional Type Certificates to enable them to be operated. Thus, they conform to the types of provisional type certificates:

Class I Provisional AC
Class II Provisional AC
Provisional AC for aircraft conforming to Provisional Amendment to a TC.

2.2 How certificates are conveyed.

TC's and PTC's are conveyed in writing on FAA Form 8110-2 by the issuing FAA region (Handbook, p 13). They are signed by or for the FAA Regional Chief, Engineering and Manufacturing Branch. Concurrently, telegraphic notification is made to the FAA Chief, Engineering and Manufacturing Division, FS-100, Washington. The TC or PTC data sheet should be sent to Washington (FS-100) within 48 hours after issuance of the TC or PTC. (Handbook, pp. 14-15.) STC's, also conveyed on Form 8110-2, may be limited to one aircraft serial number of a model. When necessary the FAA

may originally convey the STC approval by telephone, transmitting the final approval notice and STC number to the holder, and then confirm it in writing. The actual STC form will then be processed as soon as all written internal documents have been received by the FAA project engineer and will be back-dated to the same date as the written communication that confirmed the STC.

2.3 Periods for which certificates are effective.

Type Certificates: TC's, STC's and Amendments to TC's are effective until surrendered by the holder. Provisional type certificates are effective as follows:

. Class I PTC	For 24 months after the date of issue;
. Class II PTC	For 12 " " " " " "
. Provisional Amendment to a TC	For 6 " " " " " "

Airworthiness Certificates:

Standard AC's, including transport category:

Indefinitely, as long as maintenance and alterations are performed per FAR 43 and 91.

Experimental Certificates:

One year from the date of issue, or less as prescribed by FAA Administrator.

Provisional AC's:

For the life of the corresponding PTC.

3. SPECIFIC TYPES AND MODELS CERTIFICATED SINCE 1969

3.1 Listing of Jet Aircraft Types/Models Complying with FAR 36 Noise Limits

All aircraft of the following types or models of types are certificated as complying with FAR 36. They are on the list only if FAR 36 is specifically listed in the "certification basis" portion of the latest revision of the TC data sheet, and only if it is clear that the limits of Appendix C are meant rather than merely the "no acoustical change" provision of 36.1 (c)(2). Although the way FAR 36 is listed varies from TC to TC, it may be presumed that FAR 36 including amendment 1 is meant in all cases, since that amendment dates from the same time period as the original FAR 36.

Some aircraft TCed before 1 Dec 1969 are included--for example, the Dassault Fan Jet Falcon, TC approved 9 Jun 1965. Obviously the original version of the TC made no mention of FAR 36. But evidently, in the course of later revisions, not only was the TC amended to approve new series of models, but also the TC data sheet was revised to declare compliance of all models to FAR 36.

New Type Certificate		TC/Date of Approval for model, or if model series, first model of series
Boeing	747-100 series*	A20WE/30 Dec 69
Lockheed	L-1011-385-1	A23WE/14Apr 69
McDonnel-Douglas	DC-10-10 series	A22WE/29 Jul 71
Dassault-Brequet	Falcon-10	A33EU/20 Sep 73
Cessna	500	A22CE/ 9 Sep 71
Groupement (airbus) d'Interet Economique	A300-B2-1A	TC approved but data sheet not yet issued.
Fokker	F28 Mark 1000	A20EU/
Dassault	Fan Jet Falcon	A7EU/9 Jun 65

*Except for those produced before 12/1/71 (approx. 127 aircraft).

Amendment to TC		TC/Date of Approval for model, or if model series, first model of series
Boeing	747 -200B series*	A20WE/23 Dec 70
	-200F "	7 Mar 72
	-SR "	13 Apr 73
	-200C "	17 Apr 73
McDonnell-Douglas	DC-10-30	A22WE/21 Nov 72
	" "-30F	30 Mar 73
	" "-40	20 Oct 72
Dassault Fan Jet Falcon	series C	A7EU/24 Feb 70
	" D	20 Jun 68
	" E	24 Feb 70
	" F	24 Feb 70
Gates Learjet	35	A10CE/28 Jun 74
" "	36	28 Jun 74
Rockwell Sabre-liner	70	A2WE/17 Jun 70
	80	30 Nov 73

For the major airframe and/or engine changes between models, see Tables IA and IB and Appendix B.

In addition, notation is made in two other TC's that some aircraft of the type (i.e., those first flown on or after 1 Dec 1973) will comply with the noise limits in Appendix C of FAR 36.** These are:

*Except for the 33 747-200B aircraft produced before 12/1/71.

**If flown according to the operating specifications in the revised TC data sheet and referenced flight manuals.

TC	Type	Wording in TC data sheet
A3WE	Boeing 727, all models	. . . all aircraft issued original standard airworthiness certificates after 1 Dec. 1973.
A6WE	McDonnell-Douglas DC9, all models	. . . all aircraft not flown before 1 Dec 1973.
A16WE	Boeing 737	[*]

Although there appears to be lack of uniformity in the wording, it is clear that FAR 36 Amendment 2 is referred to. The only other reference to noise compliance that was encountered in TC data sheets was for the Lockheed 382-G Turboprop (TC: A150). In Revision No. 8 of 1 Jun 1971, it was stated that the 382 model G only complied with FAR 21.93 (b) and 36.1 (c)(2), effective 1 Dec 69, in that noise levels had not been increased over those of the basic model (the "no acoustical change" provision). The IAI 1123 and the BH 125-600A also comply with the acoustical change provisions of FAR 36.1 (c) (2).

*The latest available revision of the TC data sheet for the 737 aircraft does not contain the notation. Nevertheless, all Boeing 737 aircraft first flown on or after 1 December 1973 must comply with the noise limits in Appendix C, per FAR 36 Amendments.

3.2 Turboprop Aircraft in the Transport Category

From 1 July 1969 to 1 December 1974, only one of the turboprop aircraft certificated referenced FAR 36 in the "certification basis" section of the TC data sheet, except as noted for the Lockheed 382G in section 3.1 above. The reference to FAR 36 for the 382G was not one of compliance to the FAR 36 noise limits, but rather to the "acoustic change" portion of FAR 36, section 36.1 (c)(2). The following turboprop aircraft models were certificated during this period:

- Complies with FAR 36 noise limits:

  Hawker Siddeley HS 748 Series 2A

- No mention of FAR 36 in TC data sheet:

  Lockheed 382F
  Nihon YS-11A-500
  Nihon YS-11A-600
  Nihon YS-11A-600
  Aerospacelines Boeing 377SGT
  Aerospatiale Nord 262A Series

- Only complies with "no acoustical change" provision of FAR 36:

  Lockheed 382G

4. SOURCES OF INFORMATION

The basic authority for certification is Part 21 of the Federal Aviation Regulations. FAA has also published a handbook, Type Certification, for the guidance of FAA Washington and Field personnel. The discussion above is drawn briefly from these two sources. Sources of information on certificates granted exist for TC's, amendments to TC's and STC's.

A ring binder of TC data sheets issued is kept in the FAA library and elsewhere, and is periodically updated in the same fashion as the FAR's. Data sheets are arranged within it by the region that issued them. Each data sheet runs from one or two to several dozen pages and contains all the specifications of the aircraft. As the data sheet is amended to include new models of the aircraft (e.g., the 200 series of the 727) the old copy of the data sheet is removed and a new version including the latest revision (amendment) is added. The specifications for each series are given separately in separate sections each assigned a roman numeral. The specifications include engine types that may be used. It is often permissible to intermix several different similar engines (e.g. JT8D-9, -9A, -11, and -15 engines on DC9-40 aircraft). Not every revision means a new series. For example, for DC-9's, the latest model approved was the DC9-21 in 1968, while the latest revision to the TC occurred September 15, 1974.

The data sheets are accessed by an "index to data sheets" in the same ring binder. This index is by TC holder (the manufacturer) and lists only the TC's awarded to each manufacturer. It is issued yearly, and is updated monthly by the use of supplementary 1-page sheets.

FAA Flight Standards Service keeps a ringbinder by region of the status of all pending actions, including applications for TC's, amendments to TC's, and STC's. This "Type Certification Projects Status" log uses a standard reporting form (see sample, next page) and is the device by which FAA regions report quarterly to FAA headquarters in Washington. Not all regions report alike. For example, on the sample sheet for the Western Region, the "% complete" space is filled in, whereas some other regions do not use this space. The same form is used to list actions completed during the quarter. (See samples on following pages and also Appendix A).

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: WESTERN REGION

PAGE: 32.

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIC: June 30, 1974

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
A5348WE-S	Bellanca 14-13-2 6/25/73 Strickfaden 110	ROBIN HARRISON, San Dimas, Calif. Install Lycoming O4-35-A engine, Hartzell HC 12x20-8 propeller, Bellanca 14-19 engine mount, cowlings, and hardware on Bellanca 14-13-2.			X			90% 9/74	
A5349WE-S	PIPER APACHE PA-23 6/9/73 Krueger 110	DENVER L. VAN HOUTEN, Norco, Ca. Install 150 HP Lycoming engines and install 180 HP Lycoming engines.			X			0% 9/74	
A5350WE-DS	Luscombe 8A 4/30/73 Krueger 110	AIRCRAFT MODIFICATION ENGINEERING SER., Lakewood, Calif. Installation of fuel tank in each wing, replacing original tank in fuselage.			X			30% 10/74	
CT5352WE-D	Douglas DC-9-51F 6/29/73 Irwin 120 (amends CT5342WE-D)	MCDONNELL DOUGLAS, Long Beach, Ca. Certifiction of DC-9-51F (series 50 aircraft) (1) Increase series 40 length by 76 inches. (2) 130 passengers. (3) 120,000 lbs. G.T.O.W. (4) JT8D-15 and -17 engines.		X				10% 1974	
T5353WE-D	Lockheed L-1011 Rammelsberg 140	LOCKHEED-CALIFORNIA CO., Burbank, Ca Approval of a modified start fuel schedule on Rolls Royce RB.211-22B engines as installed on L-1011. Data obtained during tests will be used for adjusting fuel regulators on specific engines as required.				X		50% 9/74	

TYPE CERTIFICATION PROJECTS STATUS

REGION: WESTERN

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: SEPTEMBER 19[illegible]

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	AAE-	ACTION COMPLETED	NEW STC	AMENDED STC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	STC Number:	DATE OF APPROVAL
T5436WE-D	Douglas DC-10-10	120	Sharman						-	9/74
A5449WE-S	Globe GC-1B	110	Davis						Field	
									Approval	9/74
T5456WE-D	Convair 22M	120	Patschke						-	"
CA5462WE-D	Ted Smith 601P	120	Brandt						-	"
T5472WE-D	Douglas DC-10	130	Maxwell						-	"
T5474WE-D	Lockheed L-188	120	Davis						SA2889WE	"
T5479WE-S	Douglas DC-10	120	Sharman						SA2684WE	"
A5489WE-S	Piper PA-23	120	Brandt						SA2914WE	"
T5496WE-S	Lockheed L-1011-385	120	Vasley						SA2793WE	"
T5549WE-DS	Lockheed L188A	120	Davis						SA1754WE	"
A5567WE-S	Hughes 269C	120	Astorga						SH165WE	
T5570WE-D	Douglas DC-9-32	120	Irwin						-	"
T5576WE-DS	Fairchild C-119C	120	Willoughby						SA2915WE	"
T5583WE-DS	Lockheed L-1011	120	Vasley						SA2607WE	"
T5591WE	Boeing 707-320C	120	Davis						SA2843WE	"
T5606WE	Douglas DC-9-32	120	Irwin						-	"
T5609WE-S	Douglas DC-10-10	120	Sharman						SA2583WE	"
T5628WE-D	Lockheed L-1011	120	Vasley						-	"
T5643WE-D	Douglas DC-9-32	120	Irwin						-	"
T5652WE-D	Douglas DC-10-30	120	Sharman						-	"
T5669WE-S	Lockheed L-1329	130	Mulby					SA2929WE,	SA2912WE	"
T5681WE-D	Lockheed-Boeing-Douglas:747;DC-10;L-1011	120	Wood						SA2893WE	"
T5683WE-D	Douglas DC-10-30	120	Sharman						-	"
A5710WE-S	Aero Commander	110	Mason						SA660WE	"
A5749WE-S	Beech	140	Mason						SA2907WE	"
A5750WE-S	Beech	140	Mason						SA2908WE	"

- continued

This and the following three pages show type of quarterly reporting by FAA Regions to Washington for project change-of-status.

TYPE CERTIFICATION PROJECTS STATUS

REGION: [illegible] 3.

TYPE REPORT: ☒ QUARTERLY ☐ SUPPLEMENTAL

PERIOD: SEPTEMBER 197[illegible]

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	AWE-		NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	SA Number	DATE OF APPROVAL
			PROJECTS COMPLETED							
A5751WE-S	Swearingen SA226T	140	Mason						SA2909WE	9/74
A5752WE-S	Swearingen SA226T	140	Mason						SA2910WE	"
T5759WE-D	Douglas DC-10-30	120	Sharman						-	"
T5781WE-S	Boeing 747-123	120	Wood						SA2926WE	"
A5812WE	Weatherly 201B	120	Brandt						-	"
T5861WE-D	Douglas DC-9-31	120	Willoughby						-	"
			PROJECTS CANCELLED							
T4570WE-S	Lear 23,24,25	120	Barnett - Req. of applicant							
T4692WE-DS	Boeing 727-100	120	Wood - Req. of applicant							
E4977WE-S	Continental O-470	140	Meshulam - Inactive							
E5018WE-S	Continental IO-360A	140	Acampora - Inactive							
T5081WE-D	Douglas DC-8	120	Keelaghan - Inactive							
H5123WE-D	Hughes 369	120	Astorga - Req. of applicant							
H5300WE-D	Hughes 369	120	Astorga - Req. of applicant							
T5356WE-D	Lockheed L-1011	120	Vasley - Inactive							
H5645WE-S	Aerospatiale 315B	120	Soderquist - Req. of applicant							
A5672WE-S	Bellanca 17-30	110	Krueger - Not required - See Proj.A5802WE-S							
T5728WE-S	Douglas DC-8/8F	130	Grieco - See Proj.#T5839WE-S							
A5832WE-DS	Piper PA-12	110	Strickfaden - See Proj.#A5907WE-S							

FAA Form 8110-13 (5-70) SUPERSEDES LOCAL FORMS

TYPE CERTIFICATION PROJECTS STATUS

REGION: WESTERN — 1.

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: SEPTEMBER 1971

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	PROJECTS NEEDING T.I.P. (See - AWE-110 List)		NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CT2859WE-D	No. American 265	AWE-120	Patschke							
CT3369WE-D	Douglas DC-10-30	120	Sharman							
CT3555WE-D	Douglas DC-10-30F	120	Sharman							
T4409WE-D	No. American 265-70	120	Patschke							
T4424WE-D	Douglas DC-10-10	120	Sharman							
T4491WE-D	No. American 265-70	120	Patschke							
T4541WE-D	No. American 265-40	120	Patschke							
T4550WE-D	Douglas DC-10-10	120	Sharman							
T4613WE-D	Douglas DC-10-10	130	Treacy							
T4666WE	Douglas DC-10	120	Sharman							
AT4732WE-S	Douglas DC-6	#46	Hart (SEA)							
T4750WE-DS	Boeing 727-1H2	130	Treacy							
T4787WE-DS	Douglas DC-6B	#46	Hart (SEA)							
T4867WE-D	Douglas DC-9B	120	Kjelaghan							
T4873WE-D	Douglas DC-10-10	140	Watt							
T4906WE-DS	Douglas DC-8-62	130	Treacy							
H4946WE-D	Hughes 269C	120	Astorga							
T4950WE-DS	No. American 265-40	130	Thompson							
T5021WE-DS	Fokker F-27	120	Barnett							
A5029WE-S	Beech H-18	130	Thompson							
E5043WE-S	Sikorsky S-55	120	Haynes							
P5044WE-S	Air Borne Electron.	140	Meshulam							
A5050WE-LS	Swearingen SA226T	140	Killion							
T5073WE-D	Douglas DC-10-10	130	Treacy							
T5092WE-S	Boeing 747-12	130	Wells							
T5130WE-D	No. American 265-60	130	Bulmer							
T5137WE-D	Douglas DC-10-30	140	Watt							
T5145WE-D	Douglas DC-10-30	130	Mackal							
H5169WE-D	Hughes 269C	120	Astorga							

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FAA Form 8110-13 (9-70) SUPERSEDES LOCAL FORMS

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FAA Form 8110-13 (9-70) SUPERSEDES LOCAL FORMS

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS [illegible]

REGION: WESTERN REGION

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: SEPTEMBER 197[illegible]

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	AWE-110 PROJECTS COMPLETE EXCEPT FOR F.I.R.		NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
A2978WE-S	Cessna 195A	AWE-110	Erdman							
A3231WE-S	Taylorcraft BL-65		Strickfaden							
A3734WE-S	Universal GC-1B		Erdman							
A3826WE-S	Navion A		WE-102(GRJ)							
A3835WE-S	Bellanca 14-9		Krueger							
A3876WE-S	Taylorcraft BC-12D		Krueger							
A4026WE-S	Piper PA-15		Davis							
A4180WE-S	Champion 7GC		WE-102(GRJ)							
A4222WE-S	Grumman G-164		Krueger							
A4303WE-S	Ryan -145		WE-102(GRJ)							
A4313WE-S	Morane-Saulnier 760		Strickfaden							
A4371WE-S	Spartan 7W		Strickfaden							
A4460WE-S	Beech D95A		WE-102(GRJ)							
A4497WE-S	Universal GC-1B		Krueger							
A4512WE-S	Commonwealth-Reawin		Strickfaden							
A4574WE-S	Cessna 182H		Erdman							
A4586WE-S	Cessna 190		Strickfaden							
A4587WE-S	Piper PA-18-125		Strickfaden							
A5607WE-S	[illegible] (Navion)		Krueger							
A4609WE-S	Piper [illegible]-20		WE-102(GRJ)							
A4648WE-S	Cessna 180		WE-102(GRJ)							
A4676WE-S	Funk B75L		Krueger							
A4712WE-S	Taylorcraft BL65		Davis							
A4725WE-S	Piper PA-12		Davis							
A4765WE-DS	Beech 95 Series		Krueger							

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FAA Form 8110-13 (3-70) SUPERSEDES LOCAL FORMS

GPO 888-467

The FAA Office of Management Systems gets information on registered aircraft from the Oklahoma City Aeronautical Center Thse data form the basis for Census of U.S. Civil Aircraft, CY72 published in 1974 by that office. The office has data available in unpublished form as of December 31, 1973 (microfiche of computer printouts). Data for December 31, 1974 will not be available until mid-year 1975. The data are ordered in various ways; most useful for purposes of this report was aircraft type by manufacturer by model. Unfortunately, data was not available, on new registrations only, from that office.

FAA Advisory Circular AC No. 36-1 provides noise level data for turbine-powered aircraft. It was published in May 1973, but a revised version is in preparation for issue by the FAA by the end of February, 1975. One listing identifies aircraft certificated as meeting the FAR 36 noise limits, and the other listing gives reported levels of aircraft not yet noise certificated.

5. LIST OF REFERENCES

1. Dept. of Transportation, Federal Aviation Administration. Type Certification, No. 11-72, December 28, 1967.

2. Federal Aviation Regulations. Part 21 Excerpts: Preambles 21-7, 21-12, 21-21, 21-24, 21-15, 21-39, and all subparts of Part 21 (A-N). (As updated through December 1974.)

3. Dept. of Transportation. Second Annual Report, Fiscal Year 1968. Excerpt: pp. 60-61.

4. Dept. of Transportation. Third Annual Report, Fiscal Year 1969. Excerpt: pp. 62-64.

5. Dept. of Transportation. Fourth Annual Report, Fiscal Year 1970. Excerpt: pp. 124-126.

6. Dept. of Transportation. Fifth Annual Report, Fiscal Year 1971. Excerpt: pp. 165-166.

7. Dept. of Transportation, Federal Aviation Administration. Unpublished data prepared for input into the DOT Sixth Annual Report, Fiscal Year 1972.

8. Dept. of Transportation. Seventh Annual Report, Fiscal Year 1973. Excerpt: pp. 147-148.

9. Dept. of Transportation, Federal Aviation Administration. Unpublished data prepared for input into the DOT Eighth Annual Report, Fiscal Year 1974.

10. Ibid. Census of U.S. Civil Aircraft, CY1972. April 1974.

11. Dept. of Transportation, Federal Aviation Administration, AEQ-20. Advisory Circular 36-1 of 5/31/73: "Airplane Noise Levels."

APPENDIX A

The sheets from the "Type Certification Projects Status" Log were selected because they contained major projects concerning transport category aircraft. It is believed that they represent most of such projects active in the various regions as of March 31, 1975.

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TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: CENTRAL | PAGE: 3

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: 3rd Quarter - FY 75

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
		CENTRAL REGION PROJECTS							
CA1177CE	Merkle Mark II 12/15/65(212) Reactivated 12/3/71	Ed Merkle, Wichita New Model, 1500# GW Biplane, 2 seat tandem, Lycoming IO-360-BIB 180 HP	X				1650	60% 10/31/75	
CT2762CE-D	Lear 35/36 8/30/70(212)	Gates Learjet Corp. New Model 35/36 to A10CE	X				2550	95% 6/30/75	Approved 6/28/74
A2952CE-S	Piper PA18-150 12/15/70(214)	Central States Aircraft, Inc. Installation of Lycoming O-360-C2A engine and Sensenich			X		300	70% 5/31/75	
A3351CE-S	Naval Aircraft N3N-3 3/21/72(212) Reopened 3/5/75	Fred Niedner & Thomas Ahlers Single step central float, one cut-rigger float under each lower wing			X		175	75% 6/30/75	
A3384CE-S	Cessna 180 5/6/72(213)	Eric A. Evenson Installation of Federal ITaT Model F-200 autopilot			X		150	10% 5/15/75	
T3475CE-D	Cessna 500 (212)	Cessna Aircraft Co. French Certification				X		Indefinite	
CA3484CE-DO	Beech PD 261 11/1/72 (212)	Beech Aircraft Corp. New Model - twin engine, pressurized	X				500	1% 6/30/76	
A3487CE-DO	Beech PD 234-12-11 11/22/72(212)	Beech Aircraft Corp. New Model similar to A60	X				500	5% 11/30/75	

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: CENTRAL | PAGE: 10

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: 3rd Quarter - FY 75

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
T3982CE-D	Lear 35/36 7/9/74 (214)	Gates Learjet Corp. Installation of Grumman thrust reversers as optional equipment		X			200	25% 6/30/75	
T3983CE-DS	Lear 23 7/16/74(212)	Avcon Industries, Inc. Removal of toilet seat for installation of navigation sight			X		LT100	95% 6/30/75	
T3984CE-DS	Lear 24/25 7/16/74(212)	Avcon Industries, Inc. Removal of toilet seat for installation of navigation sight			X		LT100	95% 6/30/75	
T3990CE-DS	Sabreliner NA265-80 7/25/74 (213)	Aviation Services Div., Rockwell Int'l Installation of RNAV-VNAV system			X		60	10% 5/30/75	
A3993CE-D	Great Lakes 2T-1A-1 8/1/74 (212)	Great Lakes Aircraft Co. Amend TC to add optional Hartzell HC-C2YK-4F/FC 7666A-2 prop and Lycoming IO-360-B1F6 180 HP engine		X			LT100	90% 6/30/75	
A3996CE-DS	Beech A36 8/21/74 (213) Revised 10/24/74	Collins Radio Group Installation of AP-107 auto pilot, 2 Axis			X		60	80% 8/31/75	
T3997CE-D	Lear 23/24/25 8/9/74(212)	Gates Learjet Corp. Cert. to operate to 50,000 ft. with all models		X			500	1% 6/30/75	
T3999CE-D	Lear 35/36 8/1974 (212)	Gates Learjet Corp. French TC (Export)				X		Indefinite	

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TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: CENTRAL | PAGE: 23

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: 3rd Quarter- FY 75

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
		Terminated Projects							
DS74-10CEW	(213)	Recommendation to Wash. on a requested change on TS078 Crew Oxygen Masks (Requested by Wash.)				X			Completed 3/17/75
DE75-27CE	(213A,218)	Collins Radio Co. Application for designated alteration station				X			Completed 3/1/75
DT75-3?CE	Cessna A188A	Evaluation of A188B for export to Canada Assisting MOT - Canada				X			Completed 3/15/75
T3648CE-D	Lear 24/25 7/9/73(214)	Gates Learjet Corp. Installation of noise suppressor exhaust system - conduct of FAR 36 test.		X					Completed 3/3/75
A3889CE-S	Monocoupe 90A 3/25/74(214A)	Marlin G. Smith, Topeka, Kansas Remove Lycoming 235C1 engine and install A10 320E1A engine complete with prop and accessories			X				Completed 3/1/75
A3906CE-S	Beech 18 3/7/74(212)	Aeronautical Engineers, Inc., Miami, Florida Installation of spar straps (forwarded by Southern RO)			X				Cancelled 3/3/75
Z3927CE	5/14/74 (213)	Collins Radio Design approval for Collins AWS-CMA Area Navigation System AWS-70A				X			Completed 3/24/75
Z4023CE-T	9/13/74 (213)	Collins Radio Group VHR-351 Nav. Receiver (TSO)				X			Completed 3/19/75
Z4048CE-I	10/16/74 [illegible]	Collins Radio Corp. [illegible]				X			Completed [illegible]

FAA Form 8110-13 (3-72) SUPERSEDES LOCAL FORMS

GPO 838-467

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: SOUTHERN

PAGE: 13

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: January 1 - March 31, 1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
Z1116SO	DAS	Pan American World Airways, Miami, Fla. Surveillance of DAS.				X		Continuing	
Z2049SO (O'Brien)	Batteries for ELT 11/11/74	B&K Electronics, Palm Harbor, Fla. PMA application to manufacture replacement batteries for Larago ELT.				X	120	10%	
Z2066SO (Goodblood)	Aircraft parts 12/31/74	Airline Training, Inc., Ft. Lauderdale, Fla. Request for PMA approval to produce parts in connection with STC SA8148SO.				X	80	75% 6/30/75	
OTHER REGIONS	PROJECTS								
A3635EA-S (Wilson)	Piper PA-28-140 10/29/74	Alpha Airways, Brooklyn, N.Y. Installation of Sensenich Model M74DM-0-54 propeller and oil cooler. (Ground inspections and flight test). (Airplane located at Arden, N.C.)			X		56	0% 6/30/75	
CH2592SW-D (MIA EMDO)	Bell 206L 1/21/75	Bell Helicopter Company, Ft. Worth, Texas. Request for conformity inspection of prototype and/or test parts manufactured by Patten/Pan Avion Div., Miami, Fla.	X				12	70% 5/31/75	
CT219EU (MIA EMDO)	Westwind 1124 12/17/72	Israel Aircraft Industries, Israel. Request for FAA conformity inspection and 8130-3 tags.	X				135	25% 6/30/75	
T102RM-DS (Bentley)	Boeing 737 2/14/75	Frontier Airlines, Inc., Denver, Colo. Installation of tray carrier cart. Conformity inspection and witness static tests, Aerospace Div. of UOP, Jacksonville Fla.			X		80	0% 5/1/75	
		CANCELLED PROJECTS							
A2063SO-S		CANCELLED 3/6/75							
A2209SW-S		CANCELLED 3/6/75							

FAA Form 8110-13 (3-70) SUPERSEDES LOCAL FORMS

GPO 888-467

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: European | PAGE: 1

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: January 1 thru March 31, 1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMENDED TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CT24EU (MEG)	BAC/Aerospatiale Concorde Filton, Engl. Toulouse, Fr. 15 July 1965	Supersonic Jet Transport. Cruise Mach number between M 1.8 and M 2.2. Aluminum alloy construction. Four Rolls-Royce/Snecma Olympus 593 engines of 38,050 lb thrust, mounted beneath the wings, tricycle type landing gear. Max. takeoff [illegible] 385,000 lb. Max. landing weight 249,9[illegible] Passenger capacity : 128.	X				10000	92% Dec. 1975	
CE26EU (REF)	Rolls-Royce/Snecma Olympus 593 (SST Eng.) Filton, Engl. 19 Jan. 1967	Basic prototype/development powerplant for BAC/SNIAS Concorde Olympus Model 593.	X				1000	90% Dec. 1975	
CT45EU (REF)	Vereinigte Flugtechnische Werke (VFW) VFW-614 Bremen, Germ. 25 July 1969	Small 44 passenger (max. density) shorthaul jet transport with two Bristol/Snecma M.45H turbofan engines mounted over wing. Takeoff gross weight 44,000 lb.	X				600	90% May 1975	

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GPO 888-467

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: European

PAGE: 2

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: January 1 thru March 31, 1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CE100EU (REF)	Rolls-Royce (B.E.D.) M-45H Filton, Engl. 9 Mar. 1970	High by-pass "advanced technology turbofan for VFW-614 short range jet transport". Development of Snecma "Mars-45" two spool engine, tentative takeoff rating thrust of 7,200 lb.	X				100	90% May 1975	
CT115EU (RJH)	Avions Marcel Dassault-B.A. Mercure St. Cloud, Fr. 25 Oct. 1968	Twin engine turbo-jet. Max. takeoff weight 119,049 lb. Two P&W JT8D-15 engines mounted under wings, low wing, tricycle landing gear. 134 passengers.	X				800	95% July 1975	
CT133EU (FJK)	BAC BAC 1-11 500 series Filton, Engl. Ltr of 12 August 1969	Twin turbo-jet transport. Max. gross weight 99,650 lb. Two RR 512-14DW engines (similar to 400 series with length increased 162 inches, span increased 60 inches, passenger capacity increased to 119). Landing weight 87,000 lb.		X			200	75% Dormant	
CE143EU (REF)	Turbomeca/ Snecma "Larzac" Paris, Fr. 27 Mar. 1970	Twin spool turbo-fan engine, 2300 lb. static thrust, Expected application is an alternate for AMD/BA Falcon 10 and Aerospatiale SN-600.	X				100	0% Dormant	

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TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: European | PAGE: 3

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: January 1 thru March 31, 1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMENDED TC	STC	OTHER	ESTIMATED TOTAL MAN-MONTHS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CT147EU (RJH)	Av. M. Dassault-Breguet Av. F.J.F. 30 Paris, Fr. 19 Oct. 1970	New transport airplane derived from Fan Jet Falcon Series F. Increased fuselage diameter and length. Passenger capacity increased to 39. Primary mission changes from executive jet to scheduled passenger carrier. Powered by two Lycoming ALF-502 turbo-fan engines. (Changed from 20T to FJF 30. Ref. SGAC letter 11 April, 1972. Published as FJF 40 since 1973 Paris Airshow).	X				400	10% Sept. 1975	
CG152EU (RJH)	Caproni Viz. "Calif"A.21J Italy 18 Sept. 1970	Two place, all metal satiplane powered by Sermel TRS 18 jet engine of 225 lb. thrust.	X				200	10% Dormant	
CA154EU (RAG)	Gen. Avia Costruzioni Aero. Pegaso F.20 Italy 20 Nov. 1970	Light, six place, retractable gear, low wing, normal category airplane, powered by two-wing-mounted Continental IO-520-F (285 HP) engines. Max. gross weight 4,420 lb.	X				200	90% May 1975	
CT156EU (RAG)	Fokker F-28 Mk 2000 Schiphol Zuid The Netherl. 1 Jan. 1971	Stretched version of M-28 Mk 1000 at 65,000 lb. max. gross weight		X			100	10% Oct. 1975	

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: European | PAGE: 4

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: January 1 thru March 31, 1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CT157EU (MEG)	Fokker F-27 Schiphol Zuid 23 Feb. 1971	Increase of takeoff power (approx. 90 S.HP) Dart 532-7R engine.		X			100	20% Oct. 1975	
CT160EU (MEG)	Fokker F-27 23 Feb. 1971	Increase of zero fuel, landing and takeoff weight for Mk 500 aircraft; T.O. 43,000 to 44,100 lb. LW. 41,000 to 42,000 lb. ZFW 38,500 to 39,500 lb.		X			100	20% Oct. 1975	
CT161EU (FJK)	Hamburger Flugzeugbau HFB-320 Hamburg, Ger. 28 Nov. 1969	Installation of CJ610-9 engine in lieu of CJ610-5, and AiResearch APU in lieu of Sauer APU; also includes pressure refueling. FAR 36 will be met by limiting -9 power to -5 levels.		X			100	0% Dormant	
CH168EU (MEG)	Const. Aero Giovanni [illegible]usta A109 Cascina Costa 18 Feb. 1971	Normal category, twin engine turboshaft helicopter. Four blades, main rotor, two bladed tail rotors. Max. weight 5,070 lb. Allison 250-C20 (400 HP) engine.	X				500	85% June 1975	
CE169EU (REF)	Sermel TRS 18 Toulouse, Fr. 16 Mar. 1971	Jet engine of 225 lb for Caproni sailplane, one centrifugal compressor and one axial compressor	X				50	10% Dormant	

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: European | PAGE: 5

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: January 1 thru March 31, 1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMENDED TC	STC	OTHER	ESTIMATED TOTAL MAN HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CT174EU (FJK)	BAC BAC 1-11 475 Filton, Engl. ARB letter 27 Apr. 1971	Twin turbo-jet transport, MGW 99,000 lb. MLW 87,000 lb. Two Rolls-Royce 512-14DW engines. Similar to 500 series with 400 series size fuselage.		X			200	0% Dormant	
CT184EU (RAG)	Short Bros. & Harland SD3-30 Belfast, N. Ireland 12 Nov. 1971	Transport category airplane. 21,700 lb. Maximum takeoff weight. 30 passengers. Two UACL PT-6-45 turboprop. engines with Hartzell five-bladed propellers.	X				500	65% Oct. 1975	
CA192EU (RAG)	Partenavia P.70 "Alpha" Naples, Italy 3 Mar. 1972	Light single engine, 2 place, low wing monoplane. Gross weight 1541 lb., 3 versions with different powerplants (RR O-200/A (100 HP); RR [illegible] A (130 HP); and Lycoming IO-360 [illegible]).	X				150	0% Dormant	
CA201EU (MEG)	Gazuit-Valladeau GV 1031 St. Laurent, Fr. [illegible] May 1972	Light, single engine, normal and utility category airplane, 2,250 lb. max. weight, Lycoming engine, Sensenich propeller.	X				80	0% Dormant	

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: European

PAGE: 6

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: January 1 thru March 31, 1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CA202EU (MEG)	Gazuit-Valladeau GV. 1020 St. Laurent, Fr. 8 May 1972	Light, single engine utility and acrobatic category airplane, 1,750 lb. max. weight, Lycoming engine, McCauley propeller.	X				80	0% Dormant	
CT206EU (FJK)	IAM Rinaldo Piaggio RP-196 Genoa, Italy 17 July 1972	Light STOL Transport category airplane. High wing T-tail, 30 passengers, 7,500 lb. payload airplane powered by four Garrett-AiResearch TPE 331-1 (665 SHP) turbo-prop. engines with Hartzell three-bladed propellers (106 in. dia.) Max. weight 21,500 lb.	X				750	10% Dormant	
CT207EU (FJK)	Hawker Siddeley HS-146 Hatfield, Eng. 8 Aug. 1972	72,000 lb., 100-passenger transport category RTOL feederliner turbojet airplane, with high wing, T-tail and dual-wheel main gear attached to fuselage and stowed in belly. Four wing-mounted Lycoming AFL 502 engines of 6,500 lb static thrust.	X				500	20% Dormant	
CT213EU (FJK)	Britten-Norman BN-4 Mainlander Isle of Wight 9 Jan. 1973	Transport category, 101 passenger airplane. Max. takeoff weight 62,500 lb. Powered by two wing-mounted plus a vertical fin mounted RR Dart RDa7 turboprop. engines with Dowty Rotol propeller. High wing.	X				500	0% Dormant	

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TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: European

PAGE: 7

TYPE REPORT: ☐ QUARTERLY ☐ SUPPLEMENTAL

PERIOD: January 1 thru March 31, 1973

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	P.T.C.	A.T.C.	T.C.	OTHER	ESTIMATED TOTAL MAN-YEARS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CE214EU (REF)	Turbomeca Bastan VIIC Bordes, Fr. 22 Mar. 1973	Turboprop., 2-stage axial compressor, single stage centrifugal compressor, annular combustor, three stage turbine. For use on Aerospatiale N 262C Fregate. * NOTE : This engine is an improved version of Bastan VI C1, but adds one stage to axial compressor. Need policy decision whether new T.C. required.					100	0% Dormant	
CP217EU (REF)	Ratier-Fores FH 206-1 Figeac, Fr.	Four-bladed, variable pitch hydraulic control for N 262C Fregate. 10.5 ft. dia., tractor, feathering, reversing, flight low pitch stops, 1517 rpm, 1046 SHP at T.O./M.C.	X				50	0% Dormant	
CA218EU (MEG)	I.A.I. Arava 101 Tel-Aviv, Is. 4 Feb. 1973	Installation of PT6A-34 engines as optional to PT6A-27 engines in FAR 23/FAR 135 Appendix A.		X			50	5% Dormant	
CT219EU (MEG)	I.A.I. Model 1124 Tel-Aviv, Is. 30 Jan. 1973	Similar to Commodore Jet 1123 except AiResearch TFE 731-2 turbo-fan engines installed. Optional thrust reversers. IAI plans to subcontract certification work and "certify new systems and installations to FAR 25". IAI Technical Spec. 4650/5422, 5 June 1972 provides details.		X			200	10% Sept. 1975	

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FAA Form 8110-13 (3-70) SUPERSEDES LOCAL FORMS

GPO 898-457

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

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TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: January 1 thru March 31, 1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CT220EU (MEG)	Aerospatiale Nord 262C Fregate Toulouse, Fr. Ltr 31 Jan. 7	Same as Nord 262-A12 except with crease in take-off weight to 25,300 lb and installation of Turbomeca Bastan VIIC engines with Ratier Forest FH-206 4-bladed propellers.		X			200	0% Dormant	
CA223EU (RAG)	Stil-Industri STIL-BA-11 Vargarda, Sweden 31 Aug. 1973	Single engine, two-place, bi-wing, acrobatic cat. airplane, powered by 200 HP Lycoming engine and Hartzell propeller. Max. takeoff weight 1,540 lb.	X				200	0% Aug. 1975	
CA224EU (RJH)	Socata(SNIAS) Rallye 100S Tarbes, Fr. 7 May 1973	Single engine, two-place, low wing, utility category monoplane of the basic MS 800 series approved under TC 7A14. Powered by Continental or RR O-200-A engine and McCaulley prop. Max. weight 1656 lb.		X			40	60% June 1975	
CE225EU (REF)	Turbomeca Astazou XVIIIA Bordes, Fr. 10 Dec. 1973	Turboshaft engine rated at 1032 SHP. To be used in Aerospatiale helicopter SA 360.	X				100	10% Dec. 1975	

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CT227EU (FAA)	Poligart-Corp PD-01 Zugi Rosenberg weg, Switzerl. 27 Nov. 1973	Twin turboprop (UACL PT6A-45) powered, high wing, transport category airplane intended for either short field length, land or water based (floatplane) operation with cargo, passenger, or mixed cargo/passenger payload. Both pressurized and non-pressurized version to be offered. Max. takeoff weight is 14,300 lb. Approx. max. passenger configuration for 20 persons.	X				500	5% Nov. 1977	
CA228EU (RAG)	Aeronautica Macchi S.p.A AM 3C Milan, Italy 22 Feb. 1972	Single engine, high wing, three-place normal and utility category airplane with max. takeoff weight of 3,858 lb. Change to basic Model AM 3 airplane approved under T.C. A19EU.		X			80	75% June 1975	
CA230EU (RAG)	Scottish Av. HP-137 Series 200 Prestwick Airp. Scotland 19 Nov. 1973	Same as Jetstream HP-137 Mk I, except more powerful Astazou XIV engines in lieu of Astazou XVI, and changes to flight controls necessitated by increase in power.		X			80	5% June 1975	

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CT231EU (RJH)	Av. M. Dassault Breguet Av. F.J.F. 50 St. Cloud, Fr. 14 Nov. 1973	Three-engine, long-range development of FJF Series F transport airplane, incorporating 100 inch increase in fuselage length, 1000-gal. increase in fuel capacity via fuselage tank, and 3 AiResearch TFE 731-3 eng. in lieu of 2 GE CF 700-2D-2. Max. takeoff weight 36,375 lb. (Formerly FJF 20, Model 3)		X			300	10% Dec. 1975	
CG235EU (RJH)	Schempp-Hirth JANUS Kirchheim, Germany 1 Mar. 1974	Two-seat cantilever sailplane in fiberglass. Two piece wing, flaps, brakes, fixed main nose gear, and all movable tailplane. Drag chute installed in rudder.	X				40	5% June 1975	
CG237EU (RJH)	Slingsby Sailplanes T.61.B Yorkshire, Eng. 22 April 74	Derivative of T.61.A which is Slingsby version of Scheibe SF.25.B. (LBA TC No. 653). The T.61.B. has Franklin 2A-120-A engine in lieu of T.61.A Stamo MS.1500/1. Two-place, side-by-side seating, low wing, nose engine mounted self-launching powered glider.	X				40	15% June 1975	

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PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	CHANGE TO TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CH240EU (MEG)	Aerospatiale SA-360 "Dauphin" Toulouse, Fr. 26 June 1974	Ten-place, single engine, transport category helicopter of 2800 kg (6180 lb) max. wt. featuring a 13-blade "Fenestron" type tail rotor encased in the vertical tail surface. The 1032-SHP Astazou XVIIIA engine (for which FAA TC application has been filed) is derated to 782 SHP for installation in the SA-360.	X				200	10% Mar. 1976	
CA241EU (RJH)	N. D. Norman Esq. NDN1 "Firecracker" Isle of Wight 17 June 1974	Single engine, low wing, tandem 2 seat, 2,300 lb. utility category; 2,000 lb acrobatic category; 1,700 lb acrobatic category.	X				40	15% June 1976	
CG242EU (RJH)	Molino Oy PIK-20 Helsinki, Finl 24 June 1974	Standard class sailplane, 15 meter span, single seater, FRP sandwich structure, max. gross weight 400 kg (882 lb.)	X				40	80% June 1975	
CT244EU (FJK)	Hawker-Siddeley HS-125-700 Hatfield, Eng 4 Sept. 1974	The HS-125-700 series is derived from the series 600. The Viper 601-22 engines are replaced by Garrett TFE 731-3 turbo-fan engines and the overfin is redesigned.		X			200	5% July 1976	

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PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMENDED TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CT245EU (FJK)	Construcciones Aeronauticas CASA 212C Madrid, Spain 7 Sept. 1974	The CASA Model 212 is a high wing, twin turbo-prop airplane, fixed tricycle landing gear, max. gross weight 13,230 lb, powered by 2 Garrett TPE 331-201 turbo-prop engines and Hartzell HC-B3TN-5D props. 18 place plus 2 crew.	X				150	25% Sept. 1975	
CL246EU (RJH)	Thunder Balloons Ltd. AX5, AX6, AX7, AX8, AX9 London, Engl. 17 Jan. 1974	Hot air balloons of bulbous 12 and 20 gore type utilizing polyamide nylon with polyurethane sealer. The cubic volume varies from 42,000 cu. ft. to 140,000 cu. ft. and utilizes single or double liquid propane fueled air heaters. The occupancy varies from 2 to 8 men.	X				20	80% June 1975	
CE247EU (REF)	Rolls-Royce (1971) Ltd. RB211-524 Derby, Engl. Jan. 1974	Uprated version of RB211-22B 48,000 lb. thrust. To be used on long range L-1011 and larger version of B747.		X			100	10% Oct. 1975	
CE248EU (REF)	Rolls-Royce (1971) Ltd. RB211-22F Derby, Engl. Jan. 1974	Uprated version of RB211-22B to 42,500 lb. thrust at ISA + 13.9°C. Will give L-1011 longer range.		X			100	0% April 1976	

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PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMD TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CE249EU (REF)	Rolls-Royce Motors Continental IO-360A, C, D, G & H Crewe, Engl. 29 Aug. 1974	Manufacture under license agreement with Teledyne Continental Motors, USA. Engine currently FAA certified. Continental is TC holder.	X				50	20% July 1975	
CT250EU (RAG)	Fokker-VFW F-28, Mk 6000 Amsterdam Ther Netherl. May 23, 1973	Same as "stretched" MK 2000, except with increase in zero-fuel weight to 56,000 lb. plus full-span wing leading edge slats, 5-foot increase in wing span, increase in thrust rating, and engine silencing provisions.		X			100	25% April 1975	
CT251EU (RAG)	Fokker-VFW F-28, MK 5000 May 23, 1973	Same as basic Mk 1000, except with full-span wing leading-edge slats, 5-foot increase in wing span, increase in thrust rating, and engine silencing provisions.		X			100	25% April 1975	
CH252EU (MEG)	Aerospatiale SA-365 Marignane, Fr. Nov. 20, 1974	Same as single-engine SA-360 "Dauphin" T-Cat. helicopter, except with two Turbomeca "Arriel" engines; same as SA-366 except for engine model.	X				50	5% June 1976	

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CT134NW-S	Boeing 707 5/21/73 Cook 212	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Modernization of 707-300B/C series airplanes to the 707-500B/C. New model will be 200" longer (120" fwd. of wing, 80" aft.) with quiet nacelle engines super-jet interior, installation of two Type II exits. Boeing will make this model available as a new production airplane or will modify existing 300B/C to 500B/C config. There is no change in the wing structure. Fuselage is the same except for inserts.			X		9466	5% 6/75	
A153NW-S	Beech 65 6/30 '73 Dickson 219	HAROLD CLARK, OLYMPIA, WA Installation of individual landing gear position lights (3) to show when each landing gear leg is in the "safe-for-landing" position, per Clark CTLB-1 installation instructions.			X		40	10%	
T165NW-D	Boeing 747 7/18/73 Nelson 212	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Additional passengers on upper deck. Installation of new exit similar to existing crew service door, to be located on lefthand side opposite CSD.				X	188	70%	
CT167NW-D	Boeing 747SP 7/27/73 Connally 212	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Similar to 747-100 except: Fus 48' shorter, Fin 5' taller, new T.E. flap & system double slotted rudder, other changes as described in Boeing letter EA-6660 dated July 27, 1973.		X			1590	20%	

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A219NW-S	Republic RC-3 10/26/73 Dickson 219	AERO CRAFT, INC., BELLEVUE, WA Installation of wide spray rails in the place of existing rails. Multiple.			X		0-20	60%	
A220NW-S	Republic RC-3 10/26/73 Dickson 219	AERO CRAFT, INC., BELLEVUE, WA Installation of a larger windshield (see photo). One-only.			X		0-20	60%	
A221NW-S	Republic RC-3 10/26/73 Dickson 219	AERO CRAFT, INC., BELLEVUE, WA Installation of a Lycoming GO-480-B1D engine and a Hartzell HC-83X20CL propeller in a Republic RC-3 aircraft. Multiple.			X		50	60%	
A222NW-S	Republic RC-3 10/26/73 Dickson 219	AERO CRAFT, INC., BELLEVUE, WA Revised instrument panel in accordance with Aero Craft drawing. Mounted 13.5" forward. Multiple			X		0-20	60%	
A235NW-S	Aero-Comm 11/25/73 Dickson 219	GERALD E. GOETZ, OLYMPIA, WA Installation of wind deflector devices to outboard tire well to accomplish "gear-up".			X		30	30%	
T236NW-D	Boeing 707-300B/300C 11/7/73 Moreland 214	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Quiet nacelle installation on Boeing Model 707-300B/-300C equipped with Pratt & Whitney JT3D-1, -3, and -7 engines. Purpose of modification is to demonstrate compliance with FAR [illegible], Appendix [illegible] Noise Limit.				X	1545	10% 7/1/75	

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PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
T237NW-D	Boeing 707-100B 11/7/73 Moreland 214	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Quiet nacelle installation on Boeing Model 707-100B equipped with Pratt & Whitney JT3D-1 and -3 engines. Purpose of modification is to demonstrate compliance with FAR 36, Appendix C, noise limit.				X	930	10% 7/1/75	
T238NW-D	Boeing 720B 11/7/73 Moreland 214	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Quiet nacelle installation on Boeing Model 720B equipped with Pratt & Whitney JT3D-1 and -3 engines. Purpose of modification is to demonstrate compliance with FAR 36, Appendix C, noise limit.			X	X	650	10%	
A255NW-S	Stinson SR-10J3 11/1/73 Dickson 219	LES R. KARES, KENT, WA Installation of a Pratt & Whitney R985 engine, engine mount and a Hamilton Standard 2D30 propeller.			X		40	20%	
T262NW-D	Boeing 747-136 12/21/73 Harrigan 213	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Follow-on airplanes with RCA weather radar in lieu of E. K. Co. radar and Hamilton Standard flight recorder in lieu of the Plessey System previously installed.				X	100	80%	
A282NW-S	EDO Floats 2200, 2870, 2960 2/19/74 LaBrash 219	ARTHUR D. INGALLS, KIRKLAND, WA Installation of hatch cover to provide storage within float compartment.			X		60	90%	

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PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	DATE AMENDED	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
A309NW-S	Travelair 2000 3/7/74 Dickson 219	GREGG C. CALDWELL, VANCOUVER, WA Installation of Lycoming R-680E3 engine, Hamilton Standard 4B20 propeller, and governor.		X	X	70	50%	
A315NW-S	Piper PA-28R 3/21/74 Dickson 219	SEATTLE MANUFACTURING CORPORATION, BELLEVUE, WA Installation of a 3-part skid made in two baggage and [illegible]		X	X	40	15%	
A320NW-S	Meyers 145 3/25/74 Dickson 219	CARL R. SCHWARZ, KENT, WA Installation of a Continental IO-360-C engine and a McCauley D2A-34C67/76C-2 propeller. Also, a weight increase from 1910# to 2150#.		X	X	50	35%	
A322NW-S	Luscombe 8E 3/14/74 Dickson 219	WAYNE F. REAVIS, MEDFORD, OR Installation of Hartzell HC-82X G-23 with 7636D-4 blades with Lycoming O-320 engine as per STC SA173.		X	X	30	10%	
CT323NW-D	Boeing 727-200Z 3/29/74 Mack 212	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Derivative of Model 727-200 with the following changes: - Increased max taxi gross weight of 212,500 lbs. (Max brake release 209,500# ldg wt., 161,000#; zero fuel 141,7#? Vmo= 350 KEAS) - Body fuel tanks previously approved on 727-2J4 - Wing tip extension of 3 feet - Extended L. E. - Variable camber L. E. flaps - Wing strengthening	X		X	4610	5% 7/77	

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PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEN. TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CT324NW-D	Boeing 727-300A 3/29/74 Mack 212	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Derivative of Model 727-200 with changes incorporated on 727-200B (wing, etc.) and the following additional changes: - Four wheel truck-type main landing gear - Body length increase of 120 inches forward of wing and 60 inches aft of wing		X		X	2780	5% 7/78	
T328NW-S	Boeing 737-200 4/1/74 Dickson 219	AIR REPAIR, INC., RENTON, WA Installation of modified lower interior sidewall in accordance with Dwg. No. AR-010 to increase service life and maintain appearance of the interior of the aircraft.			X		0-20	90%	
A334NW-S	Cessna 140 4/15/74 Ulm 219	ARCHIE M. ANDERSON, SEATTLE, WA Installation of an exhaust augmented cooling system for a C65 engine.			X	X	40	10%	
A335NW-S	Luscombe 11A 4/29/74 Ulm 219	FRANK R. BIORN, GLADSTONE, OR Remove Continental 185-2 with metal propeller. Install rebuild 185-3 with Hartzell HC12 X 20-7.			X	X	40	10%	
A347NW-S	Piper J3C-65 5/2/74 Dickson 219	GERALD J. WEILER, PORT ANGELES, WA Installation of Continental O-200-A engine (less starter and generator), using the original mount, cowling, etc.			X	X	40	20%	
T349NW-DS	Lear Jet 23, 24, 25 5/6/74 [illegible] 219	THE RAISBECK GROUP, TARZANA, CA Modification of all Lear Jet airplanes by installation of hi-lift devices.			X		635	10%	

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M359NW-S	Bell 206B Dickson 219	DICKMAN LUMBER COMPANY, TACOMA, WA Addition of Plywood Snowshoes to allow landing in soft snow.			X		50	20%	
T363NW-S	Boeing 707 5/21/74 Dickson 213	SUNDSTRAND DATA CONTROL, INC., REDMOND, WA Weight Entertainment System, FAA TSO.					60	75%	
T364NW-D	Boeing 747F 5/17/74 Connally 212	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA First-of-a-Model with side cargo door and revised cargo handling system. Installation of upper deck side door.				X	208	60%	
T369NW-D	Boeing 747-200B 6/10/74 Belgeum 214	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Installation of Pratt and Whitney JT9D-70 engines on the Boeing Model 747-200B airplane.		X		X	2670	25% 1/30/76	
A375NW-S	Stinson Vultee L-5E 6/19/74 Dickson 219	DUST DEVIL SPARING Remove Sensenich propeller. Install McCauley 1B200/[illegible] 8837 for towing gliders.		X		X	30	25%	
T380NW-D	Boeing 707 6/7/74 Slifka 213	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Installation of cockpit floor grille cover for all cargo configurations (freighter & convertible).				X	77	80%	
T383NW-S	Douglas DC-7 7/9/74 Dickson 219	FUTURE AIRCRAFT COMPANY, PUYALLUP, OR Installation of auxiliary power unit.			X		50	60%	

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A447NW-S	Universal GC-1B 10/15/74 Dickson 219	MACHEN, INC., SPOKANE, WA Installation of a Franklin 6A-350-C1 engine and a McCauley D2A34C67/84SF-10 propeller.			X	X	60	20%	
T450NW-S	Douglas DC-6 10/22/74 Bulletin 213	PACIFIC ALASKA AIRLINES, FAIRBANKS, AL Modification--Divert the tail heater air to heat the [illegible] compartment during non-icing conditions.			X		144	10%	
T458NW-D	Boeing 747 10/29/74 Bolsenga 214	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Installation of Pratt & Whitney JT9D-7F engines on all models of the 747 airplane. Initial application will be on the Model 747-200B and involves propulsion system airworthiness and airplane noise certification. JT9D-7F ratings takeoff wet 50,000 pounds, takeoff dry 48,000 pounds, maximum continuous 40,300 pounds.				X	260	60%	
T460NW-D	Boeing 737-2E1 10/29/74 Miller 213	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Two Model 737-2E1 Follow-on advanced passenger A/C. Identical to previously certificated aircraft except the float switch was raised to .25 inches which increases the fuel capacity by 13 gallons.				X	33	80%	
H462NW-S	Boeing Helicopter 107-II [illegible]	COLUMBIA HELICOPTERS, INC., PORTLAND, OR Installation of Kawasaki produced rotor blades P/N 107R1202 on B.V. 107-II. Will require review of Boeing and Kawasaki drawings to determine acceptability. Compliance with AD 74-17-02 required. Project may be cancelled if Kawasaki same as Boeing.			X		79	50%	

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T487NW-D	Boeing 727-2L4 12/4/74 Slifer 213	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA One Model 727-2L4 American Capital Aviation (CN) similar to 727-233 Air Canada airplanes previously certificated except for landing weight which is same as Sterling's 727-2J4 and various customer changes.				X	56	25%	
C491NW-D	Boeing 747-245 [illegible] 213	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Model 747-2B2 Command Post Phase II.				X		10%	
P492NW-S	Hamilton Standard 3D40 12/24/74 Mooney 214	MEPOLECHOV AIRCRAFT COMPONENTS, INC., RENT, WA Replacement of HSP Part No. 50286 and Part No. 8498 with Little Giant Seal Assembly Part No. EAC 40-206.				X	136	20% 5/75	
C493NW-D	Boeing 727-200 12/17/74 Mack 212	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Program Definition - Structural Certification Model 727-200.				X	38	80%	
A494NW-S	Universal GC-1B 12/30/74 [illegible] 219	MACHEN, INC., HUGH EVANS, SPOKANE, WA Installation of Continental 10-360 engine, McCauley D2A 3AC 67/76-C2 propeller and associated changes to				X	400	10% 7/1/75	
CT497NW-D	Boeing 727-200B 12/2/74 Mack 212	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Derivative of 727-200 (Ref. Project CT496NW-D) with following differences: 40" increase in length, 200" total from 727-200 fwd; JT8D-9A(7) engines with mixer. New 'S' duct and revised [illegible] for refan engines.		X			1780	2% 12/77	

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T574NW-D	Boeing 707-3L6C 3/19/75 Klempel 213	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA One Model 707-3L6C (24) Aviation Service & Support Corp. (ASSCORP). Identical to 707-3L6B, except for customer requests. (First-of-a-Model airplane)		X			128	10% 6/30/76	
A575NW-S	Tel: nea 14-13-3 3/3/75 Dickson 219	RUSSELL N. HILLS, PEMBROKE WAY, WA Installation of a Pratt & Whitney GA-300-01 engine, McCauley propeller and landing gear door cover.			X	X	60		
T576NW-D	Boeing 737-200/200C 3/21/75 Hart 212	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Program Definition for increase in operating weights. (MTOW= 130,000 lb.). Model 737-200/200C. Reference: Boeing letter B-7670-RA-6156 dated March 21, 1975.				X	1235		
CT577NW-D	Boeing 747SP 3/12/75 Nelson 212	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Installation waste carts and waste containers manufactured by Mansfield Aircraft Products Company. Fire containment tests to be conducted at vendor plant. Mansfield, Ohio.	X				60	10%	
T578NW-D	Boeing 747-238B 3/24/75 Rasmussen 213	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA One Model 747-238B Qantas Airways, S/N 21054.		X		X	445	10% 6/30/76	
T579NW-D	Boeing 720-025 3/24/75 [illegible] 213	BOEING COMMERCIAL AIRPLANE CO., SEATTLE, WA Altitude reporting capability retrofit installation for Model 720-025 Korean Airlines.		X			48		

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FAA Form 8110-13 (3-70) SUPERSEDES LOCAL FORMS

GPO 888-467

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: WESTERN REGION | PAGE: 5.

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: Oct. 1 - Dec. 31, 1974
Second Quarter - F -1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
DS38WE	FS-1 Request R&D DC-9 8/72 Noise Reduction Acampora 140	DOUGLAS AIRCRAFT, Long Beach, Calif. R&D project on DC-9 airplane consisting of a 3-phase effort which includes the design, fabrication, ground testing, flt. testing, & economic analysis of a minimum cost noise reduction nacelle configuration for the JT8R engines installed on the DC-9.				X		60%	/
DS45WE	All Applicants for (Audible/noise) T.C. 11/27/72 Acampora 140	All applicants (all aircraft) for T.C. - Sources of audible noise. Before issuing any original T.C. for any aircraft of any category, standard, restricted, provisional, amateur & other experimental, including gliders & regardless of whether FAR 36 applies to the aircraft, the following data must be forwarded to AFS-1, Attention AFS-103: SEE AOA-1 Message dated 11/24/72. SEE CARDEX FILE - Proj. DS45WE.				X		Not Known	
DS50WE	VARIOUS Jet (Spec.Study) Transport 6/14/73 Mason 140	REQUEST FOR SPECIAL STUDY - [illegible]-140. Various. Special project study to study thrust reversers problems. (Boeing-Lockheed-No. American-Douglas-Jet Transport).				X		65% 1/75	
DO53WE	SPECIAL 7/11/73 Mason 180	AIRWORTHINESS INSPECTION OF MILITARY surplus aircraft to determine potential of these aircraft for airworthiness certification.				X		1975	

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FAA Form 8110-13 (3-70) SUPERSEDES LOCAL FORMS

GPO 888 467

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: WESTERN REGION

PAGE: 8.

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: Oct. 1 - Dec. 31, 1974
Second Quarter - FY-1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
DS83WE	Douglas DC-8-61 R&D Phase II Noise 5/1/74 Griffith 140	R&D ON DC-8-61 AIRPLANE. Phase II "Aircraft Noise Definition". Object to improve statistical accuracy of noise data and to broaden the data base to include measurements at long distance & at a thrust required for a steep approach.				X		1975	
DR84WE	1974-1975 Airworth. Review Program 5/3/74 Frei 104	FOR 1974-1975 AIRWORTHINESS PROGRAM. To cover all TDY in Washington, D. C. by AWE-100 personnel to assist Wash. Staff (AFS-77) in support of this program. Also includes TDY relative to participation in the scheduled (Dec. 2 - 11, 1974) conference.				X		12/75	
DS85WE	Research & Design (Airspeed Calibration) 5/6/74 Blackaller 160	RESEARCH & DESIGN - AIRSPEED CALIBRATION The purpose of this project is to research, design, buy materials and construct one or more "trailing cone static sources" for AWE-160 to use for airspeed calibrations.				X		10/75	
DR87WE	Request by AFS-140 Rotor Failures (Investigation) 7/9/74 DuFour 140	AFS-140 Request - Develop criteria for approval of aircraft engine installation design for rotor containment and/or acceptable design criteria for minimizing the effects of rotor failures on aircraft structures, systems, or accessories, etc.				X		1975	
DS88WE	Technical Support to: NASA/DOT/FAA 7/19/74 Griffith 140	TECHNICAL SUPPORT (ACOUSTICS) TO NASA/DOT/FAA Task Force concerning A/C noise [illegible] evaluation. (AEC-2 Washington, D.C.)				X		1975	

RIS: FS 8110-3

REGION: WESTERN REGION | PAGE: 16.

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: Oct. 1 - Dec. 31, 1974
Second Quarter - FY-1975

TYPE CERTIFICATION PROJECTS STATUS

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
T4550WE-D	DOUGLAS DC-9 11/18/71 DuFour 140	DOUGLAS AIRCRAFT, Long Beach, Calif. Retrofitting all DC-9 model aircraft with P&W JT8D engines modified to reduce the sound level to that of the DC-10 airplane.				X		85% 1/75	
A4576WE-S	PIPER PA-22-135 10/20/71 Davis 110	WILLIAM L. SPENGER, San Diego, Calif. Installation of PA-22 conventional landing gear, toe brakes, 40 amp alternator, & remove control system bungee.			X			15% C/75	
A4592WE-DS	BELANCA 14-19 12/6/71 Strickfaden 110	ROLAND M. JOSELYN, Malibu, Calif. Installation of Continental IO-470F engine.			X			15% 1975	
A4610WE-S	CESSNA T207 12/15/71 ANE-110	SCENIC AIRLINES, INC., Las Vegas, Nevada Modification to doors.			X			1975	
A4665WE-S	BELL 47G-3B-1, -2 2/12/72 Davis 110	A & H WELDING CO., Sun Valley, Ca. Installation of a heat exchanger to engine tailpipe to augment cabin heat system.			X			50% 6/75	
A4674WE-S	CESSNA 180 1/17/72 Davis 110	RICHARD S. VORDER, El Toro, Calif. Installation of Continental O-470-R engine and McCauley 3A3690M-8 propeller.			X			5% 6/75	
A4688WE-S	REPUBLIC RC-3 1/14/72 Strickfaden 110	FRANCIS J. MC CARTHY, Redwood City, Calif. Installation of Continental IO-470-D engine and [illegible] propeller.			X			20% 6/75	

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FAA Form 8110-13 (3-70) SUPERSEDES LOCAL FORMS

GPO 888-467

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: WESTERN REGION

PAGE: 20.

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: Oct. 1 - Dec. 31, 1974
Second Quarter - FY-1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CT4975WE-D	LOCKHEED L-1011-385-2 2/22/72 Vasley 120	LOCKHEED-CALIFORNIA CO., Burbank, Ca. Extended range derivative of the L-1011-385-1; 3 high-bypass ratio turbofan RB. 211-24 engines; takeoff weight = 470,500#; landing weight = 355,000#; zero fuel weight = 333,000#.	X					0% 1975	
A5001WE-S	BEECHCRAFT 36 9/22/72 Wells 130	FRANK DISTEFANO, Tustin, Ca. Strobe light installation.			X			1975	
T5004WE-DS	GATES LEAR JET 9/8/72 Presba 120	LEAR AVIA, Reno, Nevada Modify Learjet 24 & 25 by: 1. Revised wing: section & plan-form; - 2. Mod. & relocate nacelle. 3. Different engine dash No. (CJ610-6 to CJ610-8). 4. Mod. fuel sys. - delete tip tanks. 5. Mod. flt. control sys. spoilers, - was ailerons. Mod. stabilizer sweep, mod. rudder sys. 6. Mod. high lift devices, add L.E. devices, & inbd. OBD flaps. 7. Mod. fuel vent. 8. Relocate inlet in vert. stab.			X			1975	
A5012WE-S	Cessna C-337 10/2/72 Kulew 72 140	CHARLES JANISSE, Granada Hills, Calif. Modification of rear engine exhaust stack installation.			X			90%	

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FAA Form 8110-13 (3-70) SUPERSEDES LOCAL FORM.

GPO 888-467

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: WESTERN REGION | PAGE: 33.

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: Oct. 1 - Dec. 31, 1974
Second Quarter - FY-1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN MONTHS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
T5336WE-D	Rockwell NA-265-80 Tarver 130	ROCKWELL INTERNATIONAL, El Segundo, Ca. Installation of battery overtemperature warning system.				X		30% 1975	
CT5342WE-D	Douglas DC-9 Series 50 6/29/73 Wood 120 (amended by CT5352WE)	MCDONNELL DOUGLAS, Long Beach, Ca. Certification of DC-9 Series 50 aircraft. (1) Increase series 40 length by 76 inches (2) 130 Passengers (3) 120,000 lbs. G.T.O.W. (4) JT8D-15 and -17 engines.		X				20% 6/75	
CT5343WE-D	Douglas DC-10 Sharman 120	DOUGLAS AIRCRAFT COMPANY, Long Beach, Ca. Approval of supplemental fuel tank to extend range of DC-10 series 30 and 40 aircraft. Tank is located in aft lower fuselage cargo compartment.				X		10% 1975	
CH5344WE-D	ROBINSON R-22 6/29/73 Soderquist 120	ROBINSON HELICOPTER COMPANY, Palos Verde, Penn., Calif. Certification of 2-place piston powered helicopter. (1) rotor diameter -302" (2 blades) (2) 1150 lb. gross weight (3) Continental O-200, 100 HP engine (4) 95 MPH cruise	X					5% 6/76	

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: WESTERN REGION

PAGE: 34.

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: Oct. 1 - Dec. 31, 1974
Second Quarter - FY-1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
CL5346WE	Balloon Excelsior AX-3 6/29/73 Brandt 120	BALLOON EXCELSIOR, Untion City, Ca. Type Certification of a one-man hot-air balloon with airborne heater. Envelope is of muit-paneled nylon reinforced with nylon tubular load tapes. Heater is propane, stainless steel. Basket is stainless steel cable reinforced rattan with reinforced plywood flooring.	X					5% 12/76	
A5350WE-DS	Luscombe 8A 4/30/73 Krueger 110	AIRCRAFT MODIFICATION ENGINEERING SER., Lakewood, Calif. Installation of fuel tank in each wing, replacing original tank in fuselage.			X			50% 7/75	
CT5352WE-D	Douglas DC 9-51F 6/29/73 Wood 120 (amends CT5342WE-D)	MCDONNELL DOUGLAS, Long Beach, Ca. Certifiction of DC-9-51F (series 50 aircraft) (1) Increase series 40 length by 76 inches. (2) 130 passengers. (3) 120,000 lbs. G.T.O.W. (4) JT8D-15 and -17 engines.		X				10% 12/75	
A5358WE-	Piper PA-24-250 .../73 Meshulam 140	KEITH A. FOWLER, Irvine, Ca. Installation of tip tanks and associated plumbing.			X			50% 5/75	
T5365WE-S	Boeing 727-257 7/18/73 Turner 130	PACIFIC SOUTHWEST AIRLINES, San Diego, Ca. Approval of aircraft interior changes to conform to PSA fleet configuration.			X			1975	

FAA Form 8110-13 (9-72) SUPERSEDES LOCAL FORMS

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: WESTERN REGION

PAGE: 37.

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: Oct. 1 - Dec. 31, 1974
Second Quarter - FY-1975

PROJECT NUMBER	NAME AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMENDED TC	STC	OTHER	ESTIMATED TOTAL MAN HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
T5423WE-DS	BAC 1-11 9/4/73 Pittman 120	NATIONAL AIRCRAFT LEASING, Encino, Ca. Modified landing gear wing and power plant. Increased ramp wt. to 92,000 lbs., & GTOW to 91,500 lbs. Reduced T.O. field lengths.			X			1975	
T5435WE-S	Sikorsky S-61N 9/7/73 Thompson 130	KAISER AEROSPACE & ELECTRONICS, Palo Alto, Ca. Add. of Kaiser helicopter Flight Director system & associated peripheral sensores to instrument panel.			X			1975	
T5436WE-D	Douglas DC-9-30 9/73 Buell 160	DOUGLAS AIRCRAFT, Long Beach, Ca. Conduct flights to certify DC-9-30 for grass turf runway operation (Norfolk Island - DER).				X		1975	
A5441WE-DS	Bellanca 17-30AA 9/12/73 Jenkins 130	AMERICAN SAFETY FLIGHT SYSTEMS, Glendale, Ca. Installation of passenger/crew restraint system.			X			75% Inactive	
A5444WE-S	Cessna 172K & M 8/13/73 Davis 110	WORLD ASSOCIATES, INC., Santa Monica, Ca. To install observers windows in lower aft fuselage in accordance with World Associates, Inc. Blue Print No. W.A. 101 and Engineering Data Report WA-3 dated May 1972.			X			6/75	
A5446WE-S	Cessna 172 8/13/73 Davis 110	WORLD ASSOCIATES, INC., Santa Monica, Ca. Cessna 172 exhaust system consisting of muffler and downward pointing tailpipe. (Eyebrow - 5A6-520)			X			6/75	

FAA Form 8110-13 (1-73) SUPERSEDES LOCAL FORMS

TYPE CERTIFICATION PROJECTS STATUS

RIS: FS 8110-3

REGION: WESTERN REGION

TYPE REPORT: [X] QUARTERLY [ ] SUPPLEMENTAL

PERIOD: Oct. 1 - Dec. 31, 1974
Second Quarter - FY-1975

PROJECT NUMBER	MAKE AND MODEL AND DATE OF APPLICATION	DESCRIPTION	NEW TC	AMEND TC	STC	OTHER	ESTIMATED TOTAL MAN-HOURS	% COMPLETE AND ESTIMATED DATE OF COMPLETION	DATE OF APPROVAL
E5798WE-DS	AiResearch 731-2 7/23/74 Kenworthy 140	AiRESEARCH MFG. CO., OF ARIZONA, Phoenix, Ariz. Modification of S/N P73143 & S/N 79101 engine to (1) replace LPC 3rd stage starter (2) replace LPC 1st stage wheel and shaft (3) replace LPC 2nd stage wheel (4) replace LPC 3rd stage wheel (5) replace LPC 4th stage wheel and shaft.			X			1975	
T5799WE-DS	Dassault Falcon 7/23/74 DA-10 Mason 140	AiResearch MFG. CO. OF ARIZONA, Phoenix Ariz. One ONLY modification of Falcon DA-10 N731FJ to permit use of engines S/N P-79101 and S/N P73143 as modified or alternately, standard production engines.			X			1/75	
T5800WE-DS	General Dynamics 7/23/74 340 Patschke 120	INTERMOUNTAIN AVIATION, INC., Marana, Ariz. Installation of various cameras, scanning and recording equipment. ONE ONLY on Convair 340 Serial No. 202. (replaces T5747WE-DS)			X			1/75	
H5805WE	ART J-2 7/5/74 Kuiper 140	AERO RESOURCES, INC., Gardena, Ca. Modification of rotor drive pitch control on ART J-2 gyrocopter.				X		1/75	
CL5808WE	Far West Balloon 8/8/74 Brandt 120	THE FAR WEST BALLOON Co., Oakland, Ca. New Model FW-6X-7 hot air balloon. Three burner liquid propane heater, basket or plywood bottom with outer lot sides.	X					5% 7/77	

FAA Form 8110-13 (1-73) SUPERSEDES LOCAL FORMS

GPO 888 467

APPENDIX B

EXTENT OF CHANGES IN AIRCRAFT MODIFIED BY AMENDMENT TO TYPE CERTIFICATE.

In this Appendix, aircraft types from Table IA are listed that have had more than one model or model series (with at least one approved since 1 December 1969). Additional characteristics of the various models are listed, permitting an estimation of how much each model has been "stretched" from the basic, or "parent" model. The "parent" model is always listed first.

All data except length is from TC data sheets.

Model	Gross Weight [1] (1000 lbs)	Length [5] (ft)	Engine Thrust [2] (1000 lbs)	Useable Fuel [4] (gal)	V_{mo} [3] (knots)
Boeing 747					
-100 series	713	225	40.08	47,334	378
-200 B "	778 or 788	225	"	51,031	"
-200 F "	778	225	"	"	"
-200 C "	"	225	"	"	"
-200 SR	613 or 573			47,334	"
DC-10					
-10	443.3	171	37.5	178 k lb.	350
-40	558	171	39.2	243 k lb.	350
-30	558	171	46.3	243 k lb.	350
-30F	558	171	46.0	243 k lb.	350
Boeing 727					
727 727-C 727-100, -100C	153, later also 161 or 170.	116	12.6	N/A	350, later 380
727-200	176, also 183, 191, and 210	136	14.2	N/A	350/380
Boeing 737					
-100 series	97.0	91	12.6 (JT8-7)	N/A	350
-200 series	up to	97	up to		
-200C series	116.	97	13.75		

Notes:

1. Maximum taxi weight.
2. Maximum continuous static thrust (of most powerful engines permitted, if intermixing allowed), standard day, sea level conditions.
3. Maximum operating speed at sea level.
4. In U.S. gal except as otherwise noted.

N/A Data given only in flight manuals, not on TC data sheet.

5. Length of fuselage to nearest foot. Data from Janes, All The World's Aircraft 1972-73.

Model	Gross Weight (1000 lbs)	Length (ft)	Engine Thrust (1000 lbs)	Useable Fuel (gal)	V_{mo} (knots)
BAC 1-11					
-200 series	80.5	84	9.99	3726	327 to 333
-400 series	87,5	84	12.25	3726	345
-500 series	100.2	97			
IAI Aero Commander					
model 1121	16.8 or 17.5	50	2.78	926	360
model 1121A	17.5	50	2.70	1090	360
model 1121B	17.5		2.78	1090	360
model 1123	20.7	52	2.925	1300	360
Hawker Siddeley DH. 125&BH.125					
DH.125					
-1A	21.2	47	3.12	1231	290
-1A/522	21.2	47	3.10	1231	285
-3A	21.7	47	3.10	1232	285
-1A/R-522	22.3	47	3.10	1366	260
-1A/S-522	21.7	47	3.10	1231	285
-3A/RA	23.1	47	3.10	1366	260
-400A	23.1	47	3.10	1366	260
[BH.125 -400A]	23.3	47	3.10	1366	260
-600A	25,0	50	3.68	1419	280 or 300
Dassault Falcon					
Fan Jet Falcon	26.68	51	4.00	1257	350
Series D	27.54	51	4.12	1330	350
Series C	26.68	51	4.00	1330	350
Series E	28.66	51	4.12	1330	350
Series F	28.66	51	4.12	1370	350

Model	Gross Weight (1000 lbs)	Length (ft)	Engine Thrust (1000 lbs)	Useable Fuel (gal)	V_{mo} (knots)
Gates Learjet					
Models 24, 24A	12.75 or 13.30	41.00	2.70	789 to 824	300
Models 25, 25A, 25B, 25C	12.75 or 15.50	45	2.78	950 to 1114	300
Models 24B, 24B-A, 25C, 24D-A	12.75 or 13.80	41.0	2.78	834	300
Models 35, 36	17.25		3.50	931 or 1110	300
Rockwell Sabreliner NA-265					
NA-265 -20, -30	17.76 or 18.65	44*	2.57	6910 lbs.	3.33
-40	Up to 19.92	44	3.00	7122 lbs.	3.33 or 350
-60	20.37	46	3.00	7122	350
-70	21.20	47	3.00	7380	350
-80	23.50		4.12	7380	350

* Overall length rather than fuselage length.

APPENDIX C

ANNUAL PRODUCTION (SALES) OF SELECTED TRANSPORT CL. TURBOJET AIRCRAFT

Type	Year '69	'70	'71	'72	'73	Estimated '74	'75
Boeing 707 all models	59	19	10	3	11	18[2]	18[2]
707-320					11[1]	18[3]	18[3]
Boeing 727 all models	115	54	33	41	92	96[2]	
727-200 (sales)					86[1]	80[2]	
727-200					92[3]	75[3]	60[3]
Boeing 737 all models	114	37	29	22	17	60[2]	
737-200 (sales)					42[1]		
737-200					23[3]	55[3]	50[3]
Boeing 747 all models	4	92	69	30	28	24[2]	25[3]
747 (sales)					35[1]		
Lockheed 1011	--	--	--	17	39	35[1]	36[1]
						42[2]	
McDonnell Doughlas DC-8 all models	85	33	13	4	--	--	--
McDonnell Douglas DC-9 all models	122	51	43	24	21	50[2]	48[3]
McDonnell Douglas DC-10 all models	--	--	13	52	57	30[2]	36[3]
DC-10 (sales)					22[1]		
DC-10-30 (sales)					18[1]		

Note: All of the following information is from DMS Civil Air raft Market Forecasts (3).

Type	'69	'70	'71	Year '72	'73	Estimated '74	'75
Fokker F-28					13	15	11
Gates Learjet 24					21	32	28
25					45	48	44
35/36				--	2	12	40
HS/BH-125					30	24	20
Lockheed 1329 Jet Star					7	--	--
Jet Star 2				(production to start 1976)			
Rockwell NA-265 Sabre series					26	27	22
BAC 111 series 400 & 475					8	6	5
Cessna Citation					81	86	135
Dassault Falcon 20					24	14	16
IAI 1123					24	12	12

Note: "--" = no production.
"Space" = no data.

All data from AIAA, Aerospace Facts and Figures 1974/5, p38, unless otherwise noted. These data differ from "transports" because air craft for executive or other use are not included.

1. Woolsey, J. P., "New Airplane Sales: A Long Cold Winter?" Air Transport World Feb 1974, pp 17-23.
2. Av. Week & Space Technology, 11 March 1974, pp75-82.
3. DMS Civil Aircraft Market Forecasts, Updated through December 1974.